CELSIUS ENERGY COMPANY

EASTERN DIVISION • 1125 SEVENTEENTH STREET, #2240 • DENVER, COLORADO 80202 • PHONE (303) 296-8945

August 18, 1989

Utah Oil, Gas and Mining
355 West North Temple
3 Triad Center, Ste. #350
Salt Lake City, Utah 84180-1203

Gentlemen:

Enclosed please find a copy of Celsius Energy Company's Application for Permit to Drill Celsius Federal Well No. 8-1 in the Salt Wash Area.

Because the oil and gas lease is Federally owned, this APD has been provided to you for approval and for your information.

If you should have concerns or suggestions, please contact me.

Sincerely,

Douglas S. Smith
Coordinator, Regulatory Affairs

DSS/jf

enc.

Form 3160-3
(November 1983)
(formerly 9-331C)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

RECEIVED
AUG 21 1989
DIVISION OF
OIL, GAS & MINING

5. LEASE DESIGNATION AND SERIAL NO.: U-64425
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: —
7. UNIT AGREEMENT NAME: —
8. FARM OR LEASE NAME: Celsius Federal
9. WELL NO.: 8-1
10. FIELD AND POOL, OR WILDCAT: ~~Salt Wash~~ Wildcat (001)
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 8 - T21S-R9E SLM
12. COUNTY OR PARISH: Emery
13. STATE: Utah

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [X] GAS WELL [X] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: Celsius Energy Company

3. ADDRESS OF OPERATOR: 1125 17th Street, Ste. #2240, Denver, Colorado 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 2221' FEL, 944' FNL, NW/4 NE/4
At proposed prod. zone:

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: Approximately 17 miles South & West of Ferron, Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
944'	2539	NA
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
2,790'	3,600' Kaibab	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): Ungraded Ground = 5740'

22. APPROX. DATE WORK WILL START*: Sept. 15, 1989

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
* 12-1/4"	9-5/8"	36	200'	108 Sacks
8-3/4"	5-1/2"	15.5	3600'	~~888~~ Sacks

*See Attachments

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED A.R. Logan TITLE Manager-Operations DATE

(This space for Federal or State office use)

PERMIT NO. 43-015-30232 APPROVAL DATE

APPROVED BY TITLE

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 9-18-89
BY: John R. Baza
WELL SPACING: R615-3-3

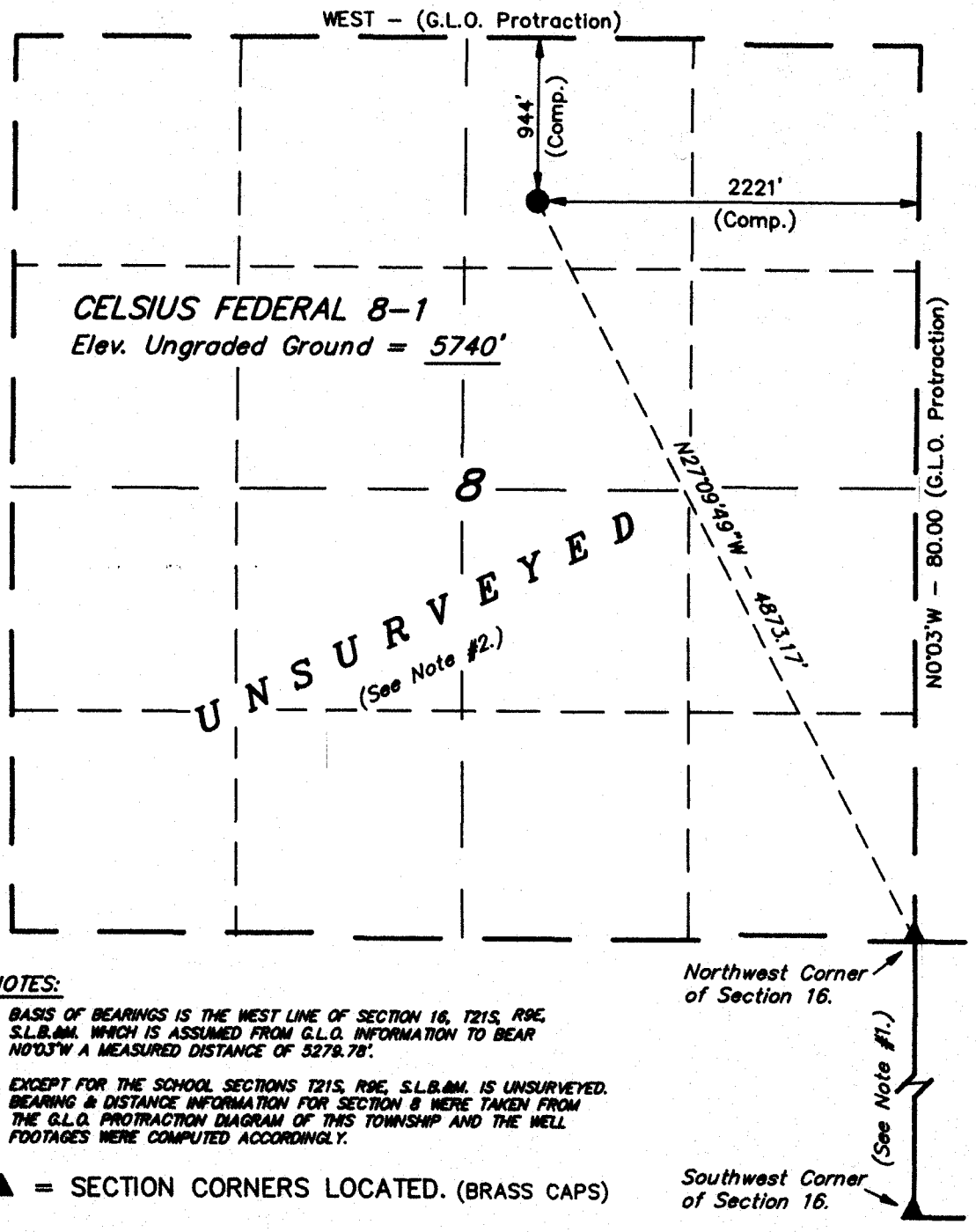
*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

CELSIUS ENERGY CO.

Well location, CELSIUS FEDERAL 8-1, located as shown in the NW 1/4 NE 1/4 of Section 8, T21S, R9E, S.L.B.&M. Emery County, Utah.

T21S, R9E, S.L.B.&M.



BASIS OF ELEVATION

SPOT ELEVATION ON A RIDGE TOP IN THE SE 1/4 OF SECTION 8, T21S, R9E, S.L.B.&M. TAKEN FROM THE HORN SILVER GULCH QUADRANGLE, UTAH, EMERY COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5784 FEET.

CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 5709
STATE OF UTAH

NOTES:

1. BASIS OF BEARINGS IS THE WEST LINE OF SECTION 16, T21S, R9E, S.L.B.&M. WHICH IS ASSUMED FROM G.L.O. INFORMATION TO BEAR N0°03'W A MEASURED DISTANCE OF 5279.78'.
2. EXCEPT FOR THE SCHOOL SECTIONS T21S, R9E, S.L.B.&M. IS UNSURVEYED. BEARING & DISTANCE INFORMATION FOR SECTION 8 WERE TAKEN FROM THE G.L.O. PROTRACTION DIAGRAM OF THIS TOWNSHIP AND THE WELL FOOTAGES WERE COMPUTED ACCORDINGLY.

▲ = SECTION CORNERS LOCATED. (BRASS CAPS)

UINTAH ENGINEERING & LAND SURVEYING
P. O. BOX 1758 - 85 SOUTH - 200 EAST
VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 5-30-89
PARTY R.L.K. B.M. J.R.S.	REFERENCES G.L.O. PLAT
WEATHER WARM	FILE CELSIUS ENERGY CO.

CELSIUS ENERGY COMPANY

EASTERN DIVISION • 1125 SEVENTEENTH STREET, #2240 • DENVER, COLORADO 80202 • PHONE (303) 296-8945

July 31, 1989

United States Department of Interior of
Bureau of Land Management
P.O. Box AB
900 North 700 East
Price Utah 84501
Attn: Laurelle Hughes

Dear Laurelle:

Be advised that Celsius Energy Company is considered to be the Operator of Celsius Federal Well No. 8-1, located in the NW/4 NE/4 of Section 8, Township 21 South, Range 9 East, SLM, Lease No. U-64425, Emery County, Utah, and is responsible under the terms and conditions of the lease for the operations conducted on the leased lands.

Bond coverage for this well is provided by Nationwide Bond No. BLM-ES-0019 (Principal Celsius Energy Company) via surety consent as provided for in 43 CFR 3104.2.

Sincerely,

D. S. Smith
Coordinator, Regulatory Affairs

DSS/jf

INTEROFFICE COMMUNICATION

FROM: H. R. Leeper — Denver, Colorado

TO: R. E. Hogan — DATE: July 25, 1989

SUBJECT: TENTATIVE PLAN TO DRILL
Celsius Federal No. 8-1
NWNE 8-T21S-R9E
Emery County, Utah

This well will be drilled to an anticipated depth of 3,600 feet by _____ Drilling Company. One work order has been originated for drilling and completion of this well, namely 450-19573-4, Drill Celsius Federal Well No. 8-1 located in NW NE Sec. 8-T21S-R9E, Emery County, Utah. Surface elevation is 5,700'.

1. Move in and rig up a contract drilling rig. Install a flow nipple and drill 12-1/4 inch hole to 225 feet KBM.

2. Run the surface casing as follows:

   a) Guide Shoe
   b) One joint 9-5/8", 36#, K-55, 8 rd thread, ST&C casing
   c) Orifice Fill Float Collar
   d) Approximately 200 feet of 9-5/8" OD, 36#, K-55, 8 rd thread, ST&C casing. Run one centralizer every other joint.

   Position the casing so that after cementing, the 11-inch, 3,000 psi casing flange will be at ground level.

3. Cement the surface casing as follows:

   a) Circulate 50 bbls. of drilling mud. Casing volume is 16 bbls. and annulus volume is calculated to be 11 bbls.
   b) 10 barrels of fresh water.
   c) 108 Sacks (126 cubic feet) of API Class "G" cement with 3% calcium chloride, 1/4 lb. per sack cellophane flake, 1/4 lb. per sack Quickseal, and 2 lb. per sack cap seal.
   d) Displace with fresh water preceded by a rubber plug. Have an extra 100 sacks of neat API Class "G" cement available on location to top off the annulus if the cement level drops after cement is in place.

4. WOC for six hours, remove the landing joint and top casing coupling, and in stall an 11-inch 2,000 psi threaded casing flange with a bull plug in one side outlet and 2,000 psi ball valve in the other side outlet. Install an 11-inch, 2,000 psi mud cross, double gated BOP, and annular preventer. Finish nippling up. After a total WOC time of sixteen hours, pressure test all pressure control equipment to its rated value. Pressure test the surface casing to 1,500 psi for ten minutes.

5. Drill 8-3/4 inch hole to approximately 3,600 feet, the exact depth to be determined by the geologist. The drilling fluid will consist of water out from under surface to 2,300 feet. At 2,300 feet, a low solids, non-dispersed mud system will be instituted to aid in catching samples through any productive intervals that may be encountered. A mud cleaner and centrifuge will be used in conjunction with the drilling contractor's shale shaker and desander to keep the mud weight as low as possible. A two man mud logging unit will be used from 1,000 feet to T.D. No coring is anticipated, but two DST's are planned, the first in the Moenkapi Formation at 2,355 feet and the second in the White Rim/Cedar Mesa Formation at 3,365 feet. Deviation surveys should be run every 500 feet. Anticipated tops are as follows:

FORMATION	DEPTH
Carmel	Surface
Navajo	750'
Kayenta	1515'
Wingate	1720'
Chinle	1975'
Moenkapi	2355'
Kaibab	3240'
White Rim/Cedar Mesa	3365'
Elephant Canyon	3525'
T.D.	3600'

Major Objective: Kaibab Formation at 3,240', Oil & Gas
Secondary Objective: Moenkapi Formation at 2,355', Oil & Gas
White Rim/Cedar Mesa at 3,365', Oil

6. Upon reaching T.D., condition the hole for running electric logs. The logging program consists of a DIL, BHC Sonic-GR, FDC-CNL (Limestone Ø), Dipmeter, and Fracture Log. All logs to be run from T.D. to 1,000' (or the base of the surface casing). If the well is deemed non-productive, lay down the drill collars, trip in open ended and plug as per approved Federal requirements.

7. If the well proves to be productive, trip in the hole with a re-run 8-3/4-inch bit to condition the mud and wellbore prior to running casing. Do not build excessive viscosity in the mud system while conditioning the hole. Trip out laying down the drill string.

8. Run the production casing as follows:

   a) A differential fill guide shoe.
   b) One joint 5-1/2" OD, 15.5#, K-55, 8 rd thread, LT&C casing
   c) A differential fill float collar
   d) Approximately 3,555 feet of 5-1/2" OD, 15.5#, K-55, 8 rd thread, LT&C casing. One turbulent flow inducing centralizer per joint will be run across all productive zones.

   Tag bottom and pick the string up one foot off of bottom. Rig up to circulate and condition the mud and wellbore.

9. Circulate at least 325 bbls. of mud while reciprocating the casing. (Calculated annular volume is 162 bbls. Casing volume is 86 bbls.)

10. Cement the production casing as follows:

   a) 10 bbls. fresh water spacer
   b) 1,000 gallons of pozzollan slurry mixed to 12 ppg.
   c) 10 bbls. fresh water spacer
   d) 413 sacks of light cement (65-35) with 6% gel, 10 lbs. per sack gillonsite mixed to approximately 12.4 ppg.
   e) 475 sacks of 50-50 pozmix cement with 2% gel, 10% salt, 1/4 lb. per sack flocele, dispersant and fluid loss reducer. The fluid loss should be reduced to less than 150 cc per 30 minute period. Slurry weight is approximately 14.4 ppg. Cement volumes are 50% excess.
   f) Displace cement with top plug and fresh water.

   Cement should be mixed and displaced so that the annular flow is turbulent.

11. With cement in place, land the casing in the 11-inch 2,000 psi casing flange with full string weight on the slips. Pick up the BOP and cut off the landing joint one (1) foot above the casing flange. Tack with a steel plate on the casing stub so that it can be knocked off with a hammer. Release and rig down the drilling rig.

Lisha

STATE ACTIONS

Mail to:
RDCC Coordinator
116 State Capitol
Salt Lake City, Utah 84114

1. ADMINISTERING STATE AGENCY
OIL, GAS AND MINING
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, UT 84180-1203

2. STATE APPLICATION IDENTIFIER NUMBER:
(assigned by State Clearinghouse)

3. APPROXIMATE DATE PROJECT WILL START:
September 15, 1989

4. AREAWIDE CLEARING HOUSE(s) RECEIVING STATE ACTIONS:
(to be sent out by agency in block 1)
Southeastern Utah Association of Governments

5. TYPE OF ACTION: /_/ Lease /X/ Permit /_/ License /_/ Land Aquisition
/_/ Land Sale /_/ Land Exchange /_/ Other_____

6. TITLE OF PROPOSED ACTION:
Application for Permit to Drill

7. DESCRIPTION:
Celsius Energy Company proposes to drill a wildcat well, the Celsius Federal #8-1, on federal lease number U-64425 in Emery County, Utah. This action is being presented to RDCC for consideration of resource issues affecting state interests. The U.S. Bureau of Land Management is the primary administrative agency in this case and must issue approval to drill jointly with DOGM before operations can commence.

8. LAND AFFECTED (site location map required) (indicate county)
NW/4, NE/4, Section 8, Township 21 South, Range 9 East, Emery County, Utah

9. HAS THE LOCAL GOVERNMENT(s) BEEN CONTACTED?
Unknown

10. POSSIBLE SIGNIFICANT IMPACTS LIKELY TO OCCUR:
Degree of impact is based on the discovery of oil or gas in commercial quantities.

11. NAME AND PHONE NUMBER OF DISTRICT REPRESENTATIVE FROM YOUR AGENCY NEAR PROJECT SITE, IF APPLICABLE:
Jim Thompson, Salt Lake City, 538-5340

12. FOR FURTHER INFORMATION, CONTACT:
John Baza
PHONE: 538-5340

13. SIGNATURE AND TITLE OF AUTHORIZED OFFICIAL
John R. Baza
DATE: 8/30/89 Petroleum Engineer

OI17/53

Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

RECEIVED
AUG 21 1989
DIVISION OF
OIL, GAS & MINING

5. LEASE DESIGNATION AND SERIAL NO.: U-64425

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: —

7. UNIT AGREEMENT NAME: —

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [X] GAS WELL [X] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

8. FARM OR LEASE NAME: Celsius Federal

2. NAME OF OPERATOR: Celsius Energy Company

9. WELL NO.: 8-1

3. ADDRESS OF OPERATOR: 1125 17th Street, Ste. #2240, Denver, Colorado 80202

10. FIELD AND POOL, OR WILDCAT: ~~Salt Wash~~ Wildcat (001)

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 2221' FEL, 944' FNL, NW/4 NE/4
At proposed prod. zone

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 8 - T21S-R9E SLM

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: Approximately 17 miles South & West of Ferron, Utah

12. COUNTY OR PARISH: Emery | 13. STATE: Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 944'

16. NO. OF ACRES IN LEASE: 2539

17. NO. OF ACRES ASSIGNED TO THIS WELL: NA

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 2,790'

19. PROPOSED DEPTH: 3,600' Kaibab

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): Ungraded Ground = 5740'

22. APPROX. DATE WORK WILL START*: Sept. 15, 1989

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
* 12-1/4"	9-5/8"	36	200'	108 Sacks
8-3/4"	5-1/2"	15.5	3600'	~~888~~ Sacks

*See Attachments

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED A.R. Logan TITLE Manager-Operations DATE

(This space for Federal or State office use)

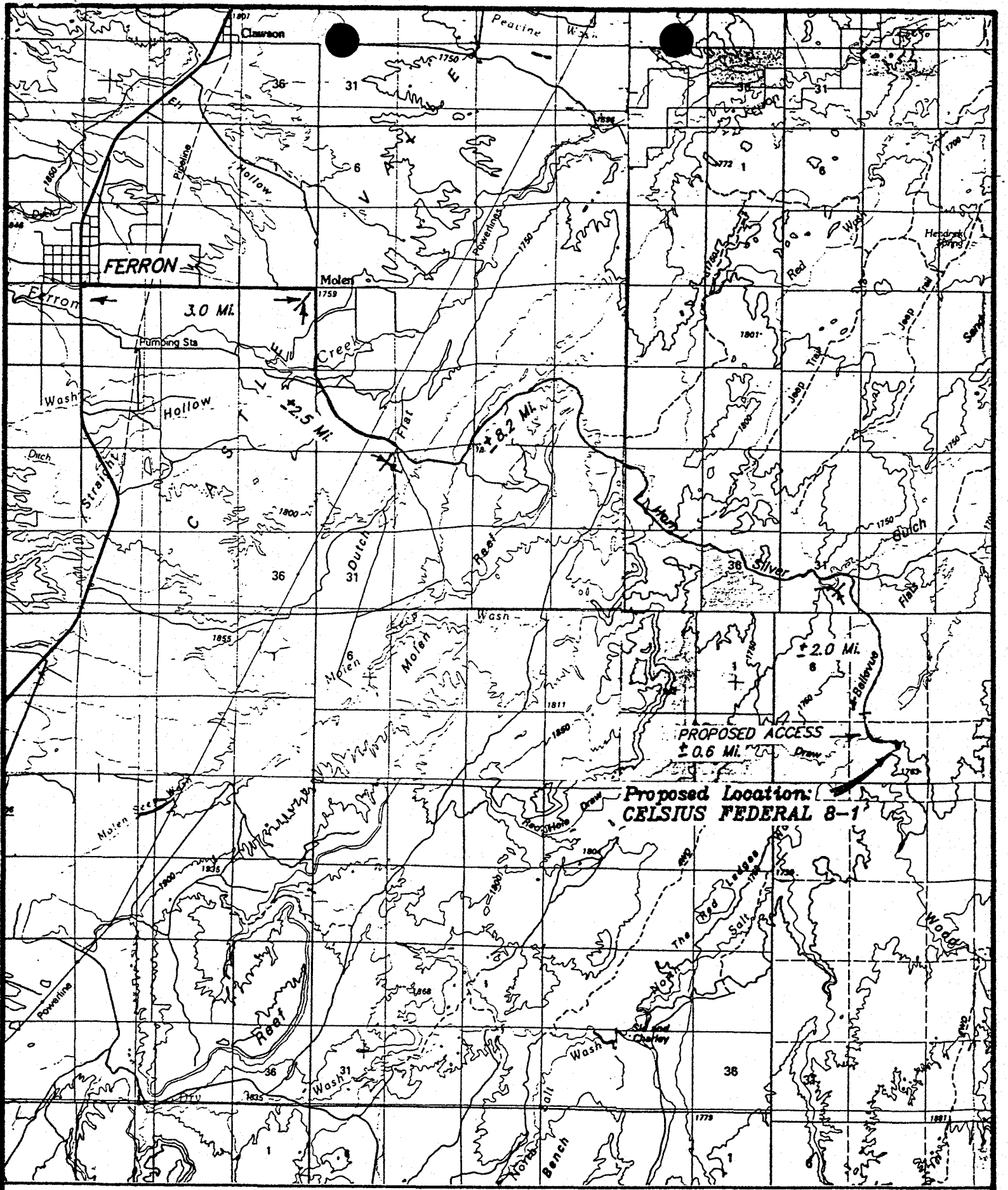
PERMIT NO. APPROVAL DATE

APPROVED BY TITLE DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

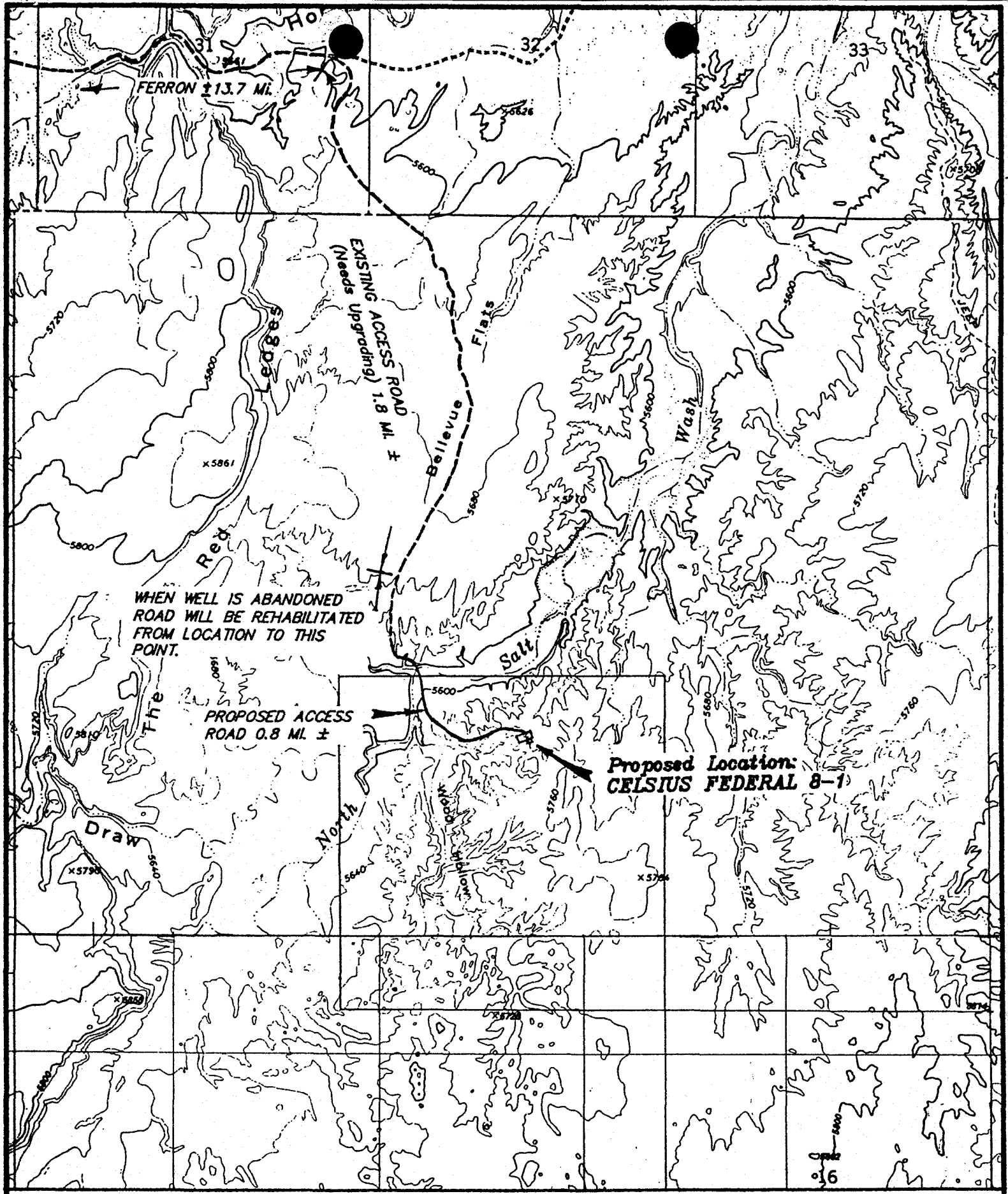


TOPOGRAPHIC
MAP "A"

N

CELSIUS ENERGY CO.

CELSIUS FEDERAL 8-1
SECTION 8, T21S, R9E, S.L.B.&M.



TOPOGRAPHIC MAP "B"

SCALE: 1" = 2000'

N

CELSIUS ENERGY CO.

CELSIUS FEDERAL 8-1
SECTION 8, T21S, R9E, S.L.B.&M.

SURFACE USE AND OPERATIONS PLAN
CELSIUS ENERGY COMPANY
FEDERAL WELL NO. 8-1
EMERY COUNTY, UTAH

1. Existing Roads:

A. Proposed Well Site as Stated: Refer to well location plat and area map.

B. Proposed Access Route: Refer to general area map.

The existing Emery County Road No. 7-05 provides access to within approximately 2-1/2 miles of the proposed well location, and is crown and ditched (in most areas) with an 18-foot to 20-foot running surface. From the county road, it will be necessary to access an unimproved section of road (2 miles) and construct an additional 1/2 mile of access road. The route selected was agreed to be, by all parties, as the most logical access to this location.

2. Plans for Improvement and/or Maintenance:

A. The Emery County Road referred to as County Road No. 7-05 (13.7 miles) will not be upgraded or maintained during the drilling phase of the project unless it is necessary to gain access to the wellsite. The existing 2 miles of road surface which leaves County Road and crosses Bellevue Flats will be improved as follows:

1. Low water crossings will be constructed in those areas of anticipated runoff as needed. Bottoms of low water crossings will be rocked where necessary, and 20-inch diameter line pipe culverts are available.

2. Access road will be flat-bladed with a running width of 18 feet. If crown and ditched, overall width will not exceed 40 feet, including ditches.

The remaining 1/2 mile of road will be constructed as follows:

A. Length: 2640-feet of new access road will be constructed. The maximum total disturbed width will be 40 feet.

B. Maximum Grade: All grades will be 10% or less, except in those areas where a pitch grade of 12% occurs. All pitch grades will be kept to 300 feet (or less) in length.

C. Turnouts: N/A

D. Location (centerline): Access road has been staked and flagged.

E. Drainage: Low water crossings will be used, are preferred by all parties, but 20-inch line pipe culverts are available if needed.

F. Surface Materials: All rip-rap, gravel and/or rock will be obtained from private sources.

Access road construction and maintenance will actually be done in two stages. The first of which will be considered the drilling phase, which entails the aforementioned stipulations. If Celsius Federal Well No. 8-1 is a productive well, any selected, identified sections of the road, as determined by Celsius Energy Company and the Bureau of Land Management, Moab District, will be upgraded as follows:

1. Length: 13,200 feet (2-1/2 miles) of road surface will be upgraded. The maximum total disturbed width will be 40 feet. Those areas not required for production will be landscaped to the surrounding topography. No depressions will be left that trap water or form ponds.

2. Maximum Grade: All grades will remain 10% or less, all pitch grades of 12% will be reduced to 10% or less grades wherever possible. All pitch grades of 12% not reduced will remain 300 feet (or less) in length.

3. Turnouts: N/A

4. Location: Road will remain in place.

5. Drainage: Low water crossings that are not sufficient to handle heavy truck traffic will be replaced by 20-inch line pipe culverts. All low water crossings will be upgraded as needed. Waterbars will be constructed at lease one (1) foot deep, on the contour with approximately two (2) feet of drop per 100 feet of waterbar and extended into established vegetation. Waterbars will be constructed with a berm on the downhill side to prevent the soft material from silting into the trench.

   Waterbar spacing will be midway between the top and bottom of the backslope and midway between the top and bottom of the foreslope.

6. Surface Materials: Upgrade and maintain access roads as necessary to prevent soil erosion and accommodate year round traffic. Access road will be crown and ditched with a running width of 18 feet. Overall width will not exceed 40 feet including ditches. Stockpiled topsoil will be distributed evenly over those areas not required for production and reseed.

   Surface disturbance and vehicular travel will be limited to the approved location and access road. Any additional area needed will be approved by the Area Manager in advance.

   If Celsius Federal Well No. 8-1 is not a productive well, the section of the access road agreed upon (refer to area map) will be rehabilitated or brought to Resource (Class III) Road Standards within 60 days of dismantling of the drilling rig. If this time frame cannot be met, the Area Manager will be notified.

3. Location of Existing Wells: There are 2 dry holes to the North, 1 dry hole to the South. Refer to area maps for the location of existing wells within a one mile radius.

4. Location of Existing and/or Proposed Facilities: Refer to area maps (there are no facilities owned or operated by Celsius Energy Company within the area). New production facilities will be applied for via Sundry Notice prior to installation.

   All permanent, on-site for six months or longer, structures constructed or installed, including oil well pump jacks, will be painted a flat, nonreflective, earth tone color to match the standard environmental colors, as determined by the Rocky Mountain File-State Interagency Committee. All facilities will be painted within 6 months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded.

If a tank, or tank battery is constructed on this lease, it will be surrounded by a dike of sufficient capacity to contain at least 110% of the storage capacity of the battery.

All load lines will extend through berm surrounding the tank battery and have valve at tank (sealed) and valve at opposite end of load line.

Any production pits will be fenced with stock-tight fence and held in place by side posts and corner braces.

All site and security guidelines identified in 43 CFR 3162.7 regulations will be adhered to.

All off lease storage, off-lease measurement, or commingling on-lease or off lease will have prior written approval from the AO.

Gas meter runs for each well will be located within 100 feet of the wellhead. The gas flowline will be buried from the wellhead to the meter and downstream for the remainder of the pad. Meter runs will be housed.

The oil measurement facilities will be installed on location, if determined to be necessary. If meters are used, they will be calibrated in place prior to any deliveries. Tests for meter accuracy will be conducted monthly for the first three months on new meter installations and at least quarterly thereafter. The AO will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports will be submitted to the Moab District Office. Royalty payments will be made on all production volumes as determined by the tank measurements or meter measurements. All meter measurement facilities will conform with the API standards for liquid hydrocarbon measurement.

5. Location and Type of Water Supply: All water needed for drilling purposes will be obtained from Ferron Irrigation Company, Ferron Creek being the source.

   A temporary Water Use Permit for this operation will be obtained from the Utah State Engineer, Mark Page, Water Rights Division.

6. Source of Construction Materials: All material will be derived from cuts on location. There will be a one (1) foot berm constructed around well pad.

7. During Construction: If, in connection with construction operations, we the Lessee/Operator, our Contractors, subcontractors, or the employees of any of them discover, encounter or become aware of any objects or sites of cultural value on the affected area, such as historical or prehistorical ruins, graves or grave markers, fossils, or artifacts, there will be an immediate suspension of construction operations in the vicinity of the cultural value and notification will be made to the BLM Authorized Officer. Operations will resume at the discovery site upon receipt of written instructions and authorization by the Area Manager, Bureau of Land Management, Price, Utah.

8. Methods for Handling Waste Disposal: Cuttings and drilling fluids will be placed in the plastic lined reserve pit which will be constructed with at least one half of its holding capacity below ground level. The mud pit will be fenced on three sides with a stock-tight fence of woven wire, prior to the onset of drilling. Immediately upon completion of drilling, the fourth side will be fenced and the liquids allowed to evaporate. The fence, along with overhead flagging, will be maintained until restoration. Any produced liquids will be contained in test tanks and hauled out by tank trucks. Garbage and other waste material will be placed in a trash cage, the contents of which will be disposed of in the nearest legal landfill (Castle Dale). Portable sewage facilities will be utilized for the disposal of human waste. Produced water will be put in the reserve pit during completion work per NTL-2B.

9. Ancillary Facilities: Camp facilities will not be required.

10. Well Site Layout: Refer to drawing for reserve pit location.

During construction, all woody vegetation and the top 6 inches of top soil material will be removed from the pad and stockpiled separately (refer to drawing). Top soil along the access road will be windrowed adjacent to the road. Existing and new access roads will be maintained in good condition.

11. Plans for Restoration of the Surface: Immediately upon completion of drilling, the location and surrounding area will be cleared of all debris, materials, trash and junk not required for production.

The reserve pit will be allowed to dry before backfilling or fluids will be removed and disposed of in a manner approved by the Authorized Officer of the BLM. Pit walls will not be breeched so as to drain fluids to the surrounding surface. As much of the pit liner will be removed as possible.

Rat and mouse holes will be filled immediately upon release of the drilling rig from location.

All disturbed areas will be recontoured to the approximate natural contours on the pad and new road to the satisfaction of the AO.

Disturbed areas, including access road, will be prepared for seeding as determined by BLM (i.e., scarified and left with a rough surface or smooth). Seed will be broadcast at a time specified by the BLM. A harrow or some other implement will be dragged over the seeded area to assure seed coverage.

Seed mixture will be determined as per BLM conditions of approval.

A Notice of Intent to Abandon and a Subsequent Report of Abandonment will be submitted for approval. The final Abandonment Notice will be submitted when the rehabilitation is complete and vegetation is established.1

12. Surface and Mineral Ownership: Surface ownership of wellsite and access road is Federal. Mineral ownership is Federal.

13. Other Information: There will be no deviation from the proposed drilling and/or workover program without prior approval of the AO. Safe drilling and operating practices will be observed. All wells, whether drilling, producing, suspended or abandoned, will be identified in accordance with 43 CFR 3162.2.

Any change in the program will be approved by the District Supervisor. "Sundry Notices and Reports on Wells" (Form 3160-5) will be filed for all changes of plans and other operations in accordance with Onshore Oil and Gas Order No. 1. Emergency approval may be obtained orally, but such approval does not waive the written requirement. Any additional construction, reconstruction, or alterations of facilities, etc., which will result in the disturbance of new ground will require the filing of a suitable plan pursuant to Onshore Oil and Gas Order No. 1 and prior approval by the AO.

The dirt contractor will have a copy of all stipulations and the surface use plan on-site during the construction and reclamation operations.

A Class III Cultural Resource Inventory has been completed and the report forwarded to:

This application is valid for a period of one year from the date of approval. Any requests for extensions will be submitted prior to the end of the one year period. If the application terminates, any surface disturbance created under the application must be rehabilitated in accordance with the approved plan within 90 days of termination, unless otherwise approved by the AO.

14. Lessee's or Operators Representative and Certification:

Andrew R. Logan, Manager of Operations, 1125 17th Street, Suite #2240, Denver, Colorado 80202. Telephone Number (303) 296-8945.

Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route, that I am familiar with the conditions which currently exist, that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Celsius Energy Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Date: July 31, 1989

Name: A. R. Logan, Manager of Operations

ADDENDUM TO

ARCHAEOLOGICAL SURVEY OF CELSIUS ENERGY COMPANY'S CELSIUS FEDERAL 8-1 WELL PAD AND ACCESS ROAD EMERY COUNTY, UTAH

LAC REPORT 8949

By
Steven L. Fuller

LA PLATA ARCHAEOLOGICAL CONSULTANTS
P.O. BOX 783
DOLORES, COLORADO 81323
(303) 882-4933

May 29, 1989

FEDERAL ANTIQUITIES PERMIT
88UT57626
UTAH STATE PERMIT
U89-LA-267b

Prepared for:
Celsius Energy Company
1125 17th Street, Suite 2240
Denver, Colorado 80202

ABSTRACT

The archaeological survey of Celsius Energy Company's Celsius Federal 8-1 well pad and access road was conducted by personnel of La Plata Archaeological Consultants in May, 1989. The project is located in Emery County, Utah on lands administered by the Bureau of Land Management, San Rafael Resource Area. During the pre-drill inspection, a section of access road was realigned and a 100 foot wide corridor was surveyed along this 1,000 foot realignment on July 29, 1989. No archaeological sites were recorded during this additional survey and archaeological clearance is recommended for the project.

INTRODUCTION

On May 25,1989 the archaeological survey of Celsius Energy Company's Celsius Federal 8-1 well pad and access road was conducted by Steven L. Fuller of La Plata Archaeological Consultants. During the pre-drill inspection, it was determined that the access road required approximately 1000 feet of new alignment and this additional survey was requested by Mr. Doug Smith of Celsius Energy. The realignment was surveyed by Steven L. Fuller of La Plata on July 29, 1989. The realigned section of access road includes a 1000 foot long segment that is on lands administered by the Bureau of Land Management, San Rafael Resource Area and are in Emery County, Utah.

The project is located in T21S, R9E, Section 8 of an unplatted township (Figure 1), on the Horn Silver Gulch 7.5' USGS quadrangle.

The new access road alignment will involve construction of a road with an 18 foot wide use surface and a corridor measuring 100 feet wide by 1000 feet long was intensively surveyed, covering a total of 2.3 additional acres. Survey coverage was completed by walking down one side of the centerline and returning down the opposite side. Prior to the archaeological survey, the centerline had been marked with lath and flagging tape by personnel of Uinta Engineering.

RESULTS AND RECOMMENDATIONS

No archaeological sites or isolated occurrences was encountered during the survey of the realigned access road leading to the Celsius Federal 8-1 well pad. Archaeological clearance is recommended for this project.

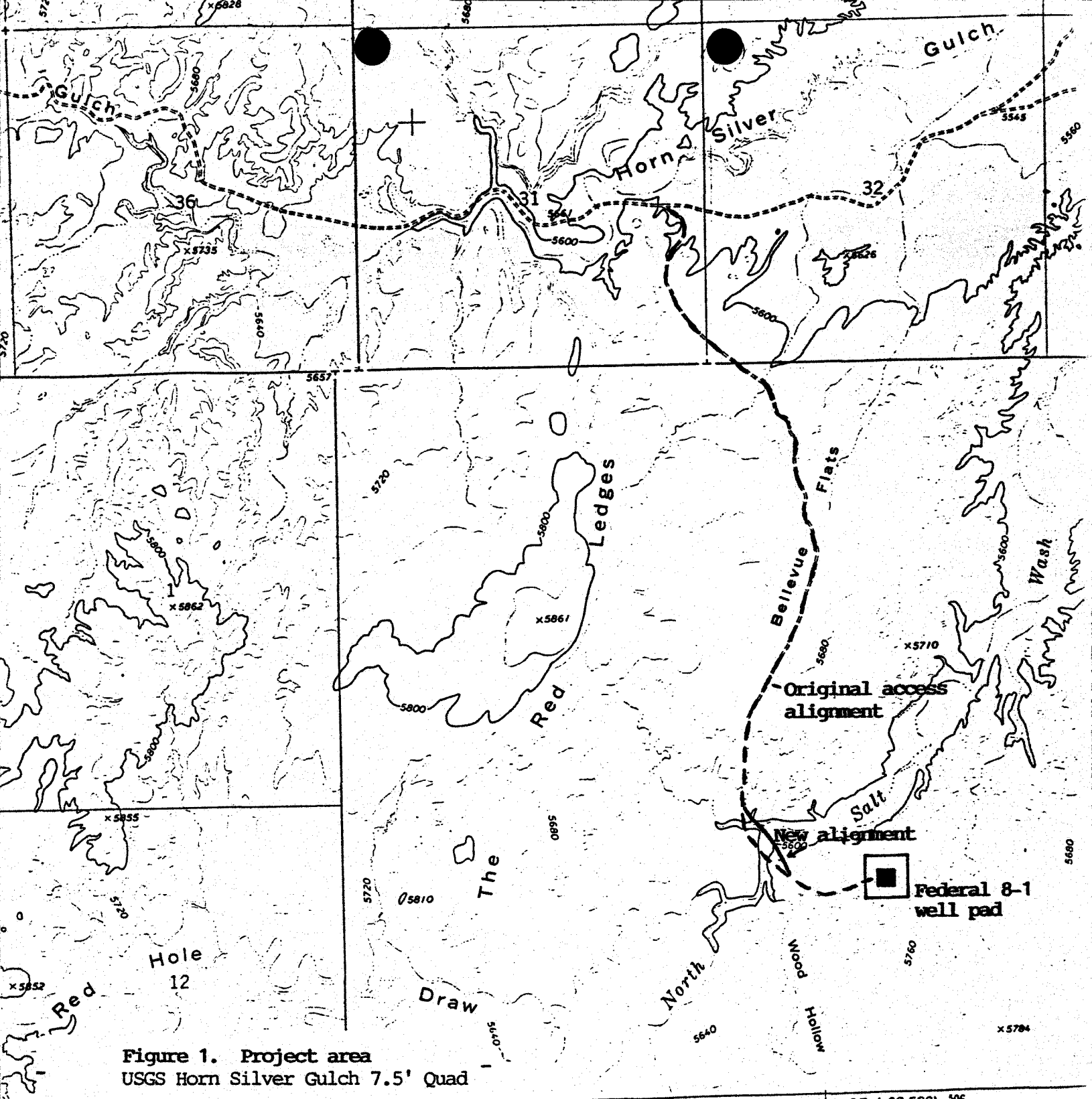


Figure 1. Project area
USGS Horn Silver Gulch 7.5' Quad

2 150 000 FEET R 8 E 503 57'30" R 9 E (SAN RAFAEL KNOB 1:62 500) 506
3861 IV

SCALE 1:24 000

1 0 1/2 1
1000 0 1000 2000 3000 4000 5000 6000
1 KILOM
1 .5 0

CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 20-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

gical Survey

rial

,m
n, central zone
cks,

ed

3

GN MN
0°02' / 1 MIL
15° / 267 MILS

UTM GRID AND 1969 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

Map photoinspected 1978
No major culture or drainage changes observed

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VI
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQU

La Plata Archaeological Consultants

P.O. Box 783
Dolores, Colorado 81323
(303) 882-4933

Ms. Kathy Flansburg
Celsius Energy Company
P.O. Box 458
Rock Springs, Wyoming 82901

May 29, 1989

Ms. Flansburg:

Please find enclosed two copies of the final archaeological survey report that we submitted to the BLM for your Celsius Federal 8-1 well pad and access road located in Emery County, Utah. We have complied with all of the BLM requirements for this project and an invoice for the total project costs is attached.

Please contact us again if you have any projects that require archaeological services in this region.

Thank you,

Steven L Fuller

Steven L. Fuller

Attachments

La Plata Archaeological Consultants

P.O. Box 783
Dolores, Colorado 81323
(303) 882-4933

Mr. Blain Miller
Area Archaeologist
Bureau of Land Management
900 N, 700 E
Price, Utah 84501

May 29, 1989

Dear Blain:

Please find enclosed the archaeological survey report for Celsius Energy's Celsius Federal 8-1 well pad and access road located in Emery County, Utah. I have recommended that archaeological clearance be granted for this project.

If you have any questions or comments, please let me know.

Sincerely,

Steven L Fuller

Steven L. Fuller

Enclosures

cc: Celsius Energy Company
Division of State History

ARCHAEOLOGICAL SURVEY OF CELSIUS ENERGY COMPANY'S CELSIUS FEDERAL 8-1 WELL PAD AND ACCESS ROAD EMERY COUNTY, UTAH

LAC REPORT 8949

By
Steven L. Fuller

LA PLATA ARCHAEOLOGICAL CONSULTANTS
P.O. BOX 783
DOLORES, COLORADO 81323
(303) 882-4933

May 29, 1989

FEDERAL ANTIQUITIES PERMIT
88UT57626
UTAH STATE PERMIT
U89-LA-267b

Prepared for:
Celsius Energy Company
P.O. Box 458
Rock Springs, Wyoming 82901

ABSTRACT

The archaeological survey of Celsius Energy Company's Celsius Federal 8-1 well pad and access road was conducted by personnel of La Plata Archaeological Consultants on May 25, 1989. The project is located in Emery County, Utah on lands administered by the Bureau of Land Management, San Rafael Resource Area. A 100 foot wide corridor was surveyed along the 13,000 foot access road and a 450 by 350 foot area was surveyed surrounding the well center stake. No archaeological sites were recorded during this survey and archaeological clearance is recommended for the project.

INTRODUCTION

On May 25,1989 the archaeological survey of Celsius Energy Company's Celsius Federal 8-1 well pad and access road was conducted by Steven L. Fuller of La Plata Archaeological Consultants. The survey was requested by Ms. Kathy Flansburg of Celsius Energy; Howard Leeper and Doug Smith of Celsius accompanied Fuller during the survey. The wellpad and access road are on lands administered by the Bureau of Land Management, San Rafael Resource Area and are in Emery County, Utah.

The project is located in T21S, R9E, Sections 5 and 8 of an unplatted township. The access road originates on an existing, bladed road in Section 31, T20S, R9E (Figure 1). The UTM coordinates for the well are Zone 12:4317580m N, 505750m E. The coordinates for the north end of the access road are 4320780m N and 505800m E. The project is included on the Horn Silver Gulch, Utah 7.5' series topographic map (Figure 1).

The project will involve constructing a well pad which will measure 250 by 150 feet and constructing an access road leading to the well pad. The road will follow an existing trail or track road right to the location and measures 2.46 miles in length from the nearest improved road which is indicated on Figure 1.

PHYSIOGRAPHY AND ENVIRONMENT

The project is located on the southeast edge of North Salt Wash which is a tributary to Horn Silver Gulch. Bordering the wash on the southeast side are exposed sediments of the Jurassic Carmel Formation which consist of eroding mudstones and

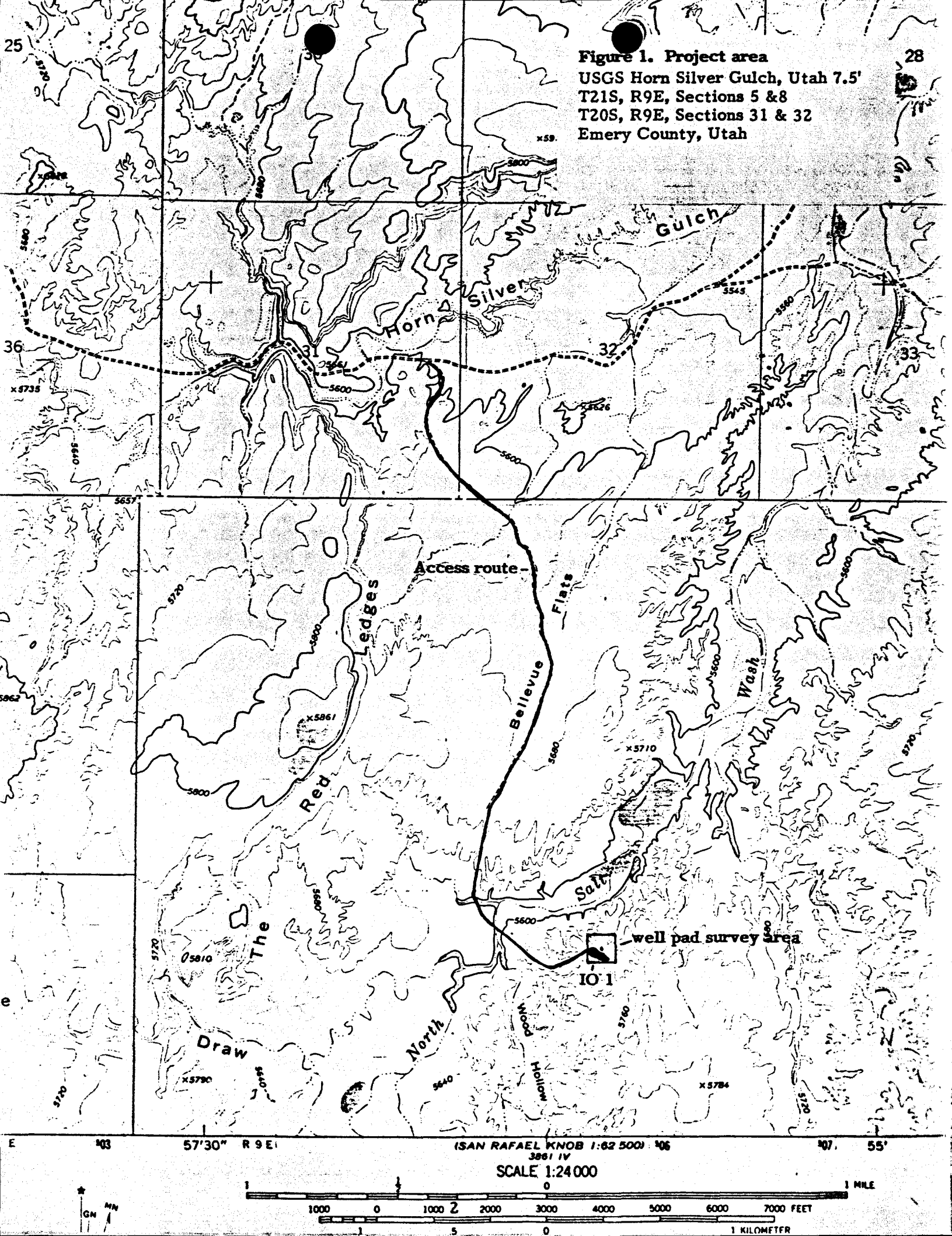


Figure 1. Project area
USGS Horn Silver Gulch, Utah 7.5'
T21S, R9E, Sections 5 &8
T20S, R9E, Sections 31 & 32
Emery County, Utah
Horn Silver Gulch
Access route
Red Ledges
Bellevue Flats
Salt Wash
The Red Draw
North Wood Hollow
well pad survey area
IO 1
(SAN RAFAEL KNOB 1:62 500)
3861 IV
SCALE 1:24000
1 MILE
7000 FEET
1 KILOMETER

shales which weather into a badland type of topography. The area surrounding the well pad is highly dissected with numerous washes leading northwest toward North Salt Wash. Also characteristic of the Carmel Formation is a high gypsum content that makes the soil highly alkaline and the name "North Salt Wash" probably originates from conditions related to these geologic exposures. The access road is mainly to the west of North Salt Wash and crosses a flat bench that is named Bellevue Flats, which extends between the Red Ledges, red cliffs to the west, and North Salt Wash to the east.

The soils in the project area vary with topography and geologic exposure. On the well pad location, soils are nonexistent due to the erodible badland sediments that are exposed. Along the access road, there is a fairly shallow sandy to silty loam that forms a mantle over the underlying shale sediments. Most of this mantle is apparently wind-deposited.

Vegetation on the well pad location includes an unidentified variety of saltbush, grasses, Mormon tea, and an unidentified deciduous shrub. The vegetation along the access road consists of grasses, saltbush, and occasional greasewood.

The present land use pattern is almost entirely devoted to livestock grazing with cattle presently using the project area. The nearest known water source is in North Salt Wash which was flowing at the time of the survey. However, this water is highly alkaline due to the presence of uplifted Carmel Formation sediments in this area.

SURVEY PROCEDURES

The official file search was conducted with the files located at the Antiquities Section on May 22, 1989. This search indicated that very few archaeological surveys have been conducted in the vicinity of the project and that the nearest recorded sites are approximately 0.6 miles to the southeast. Blain Miller, San Rafael Resource Area Archaeologist also consulted his maps on May 23, 1989, and confirmed that no existing sites are located within proximity to the project area.

The on-the-ground survey consisted of walking a zigzag transect down one side of the access road centerline and returning down the opposite side. A total width of 100 feet was covered with transect spacing averaging 50 feet or about 15 m. The proposed alignment was flagged by Celsius personnel where it extends past the limits of an existing track road which is indicated on the USGS map (Figure 1). The well pad was surveyed after it was located by personnel of Uinta Engineering who were conducting the land survey for Celsius Energy. Parallel pedestrian transects spaced about 15 m apart were used to cover the 450 by 350 foot (3.6 acre) area surrounding the well center stake. This 450 by 350 foot area encompasses the 250 by 150 well pad with an additional 100 foot buffer zone surveyed on each of the four sides of the well pad.

The access road and well pad together contain a total of 33.4 acres (13.5 ha) which

were inventoried for cultural resources for this project. All acreage is administered by the Bureau of Land Management, San Rafael Resource Area.

SURVEY RESULTS

No archaeological sites were found during the survey for this proposed wellpad and access road and it is unlikely that buried cultural deposits are present. One isolated occurrence was observed around the south edge of the proposed well pad and it is described more fully below:

ISOLATED OCCURRENCE 1

Description: Eroding from a geologic stratum exposed in Carmel Formation sediments are gravelly deposits which contain purplish chert nodules. This deposit is exposed around the south edge of the proposed well pad (Figure 1) and the horizontal nature of this exposure indicates that this is purely a geologic phenomenon. Several of the chert nodules are highly fractured and are washing downslope. It appears the most of the purplish chert material represents a fractured, natural deposit of shattered cobbles. However, there are several pieces of chert that may represent decortication flakes and several that may represent tested cores. This IO is mainly a natural geologic deposit, but it may have been utilized as a lithic material source on an extremely limited basis by unspecified human groups.

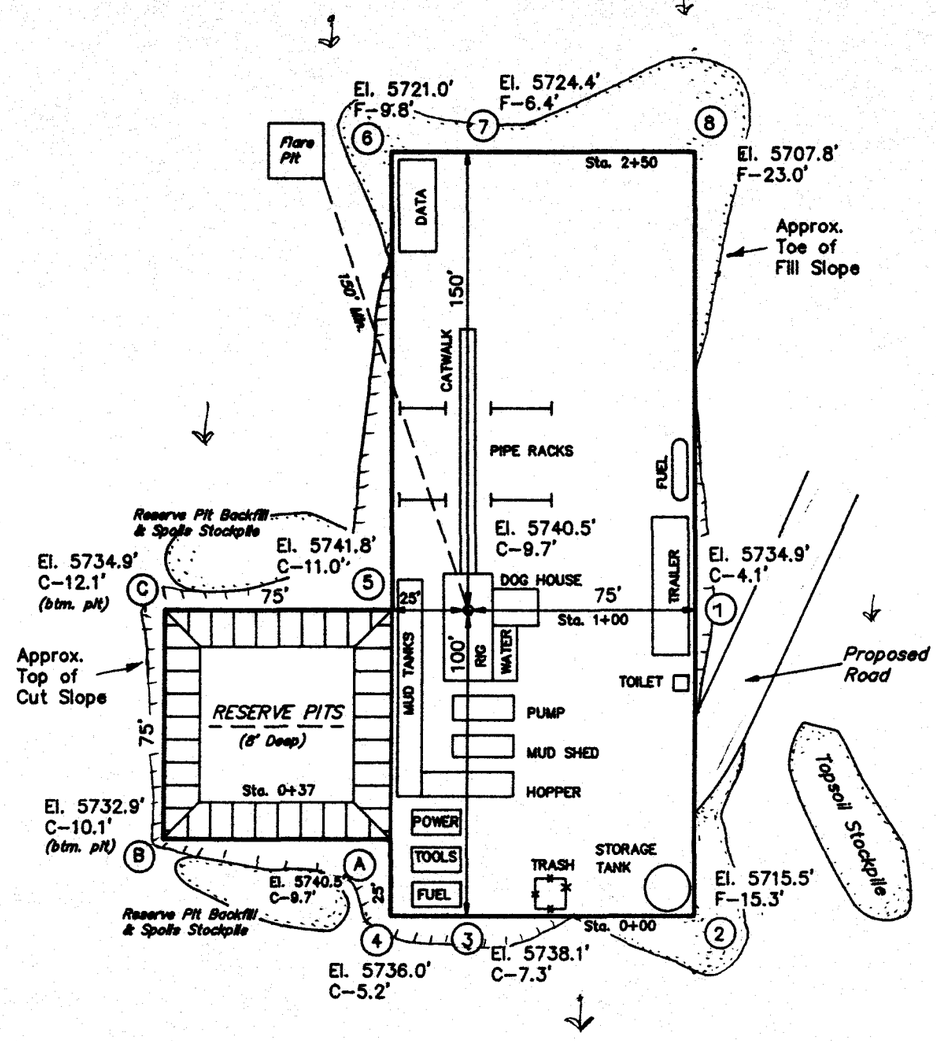
CONCLUSIONS AND RECOMMENDATIONS

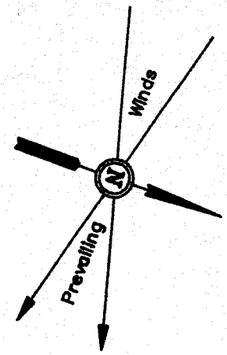
The archaeological survey for Celsius Energy Company's Celsius Federal 8-1 access road and wellpad was conducted on May 25, 1989 by personnel of La Plata Archaeological Consultants. The project is located on lands administered by the Bureau of Land Management, San Rafael Resource Area. No archaeological sites were found and archaeological clearance is recommended for the project. The single isolated occurrence is not considered to contain any further data important for the area's prehistory and no protective measures are recommended for IO 1.

CELSIUS ENERGY CO.

LOCATION LAYOUT FOR

CELSIUS FEDERAL 8-1
SECTION 8, T21S, R9E, S.L.B.&M.



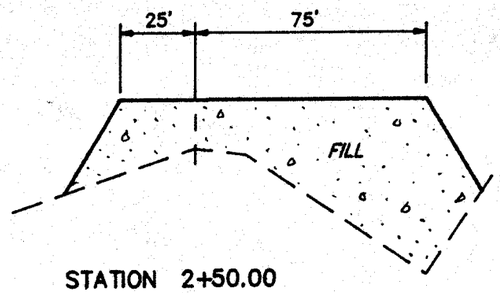


SCALE: 1" = 50'
DATE: 5-30-89

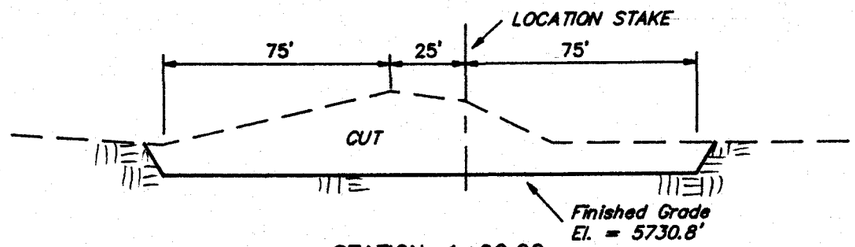
1" = 20'
X-Section Scale
1" = 50'

TYP. LOCATION LAYOUT

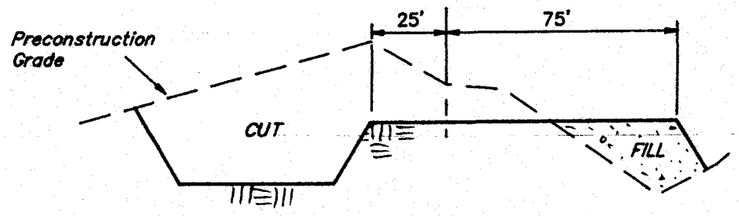
TYP. CROSS SECTIONS



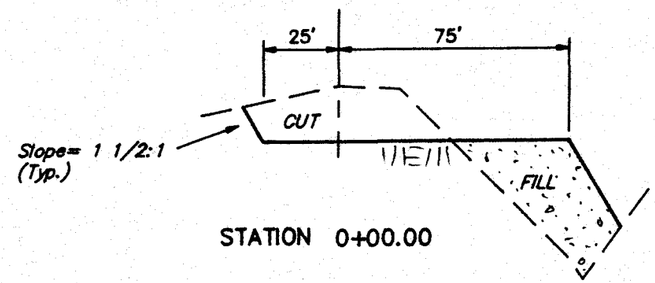
STATION 2+50.00



STATION 1+00.00



STATION 0+37.00



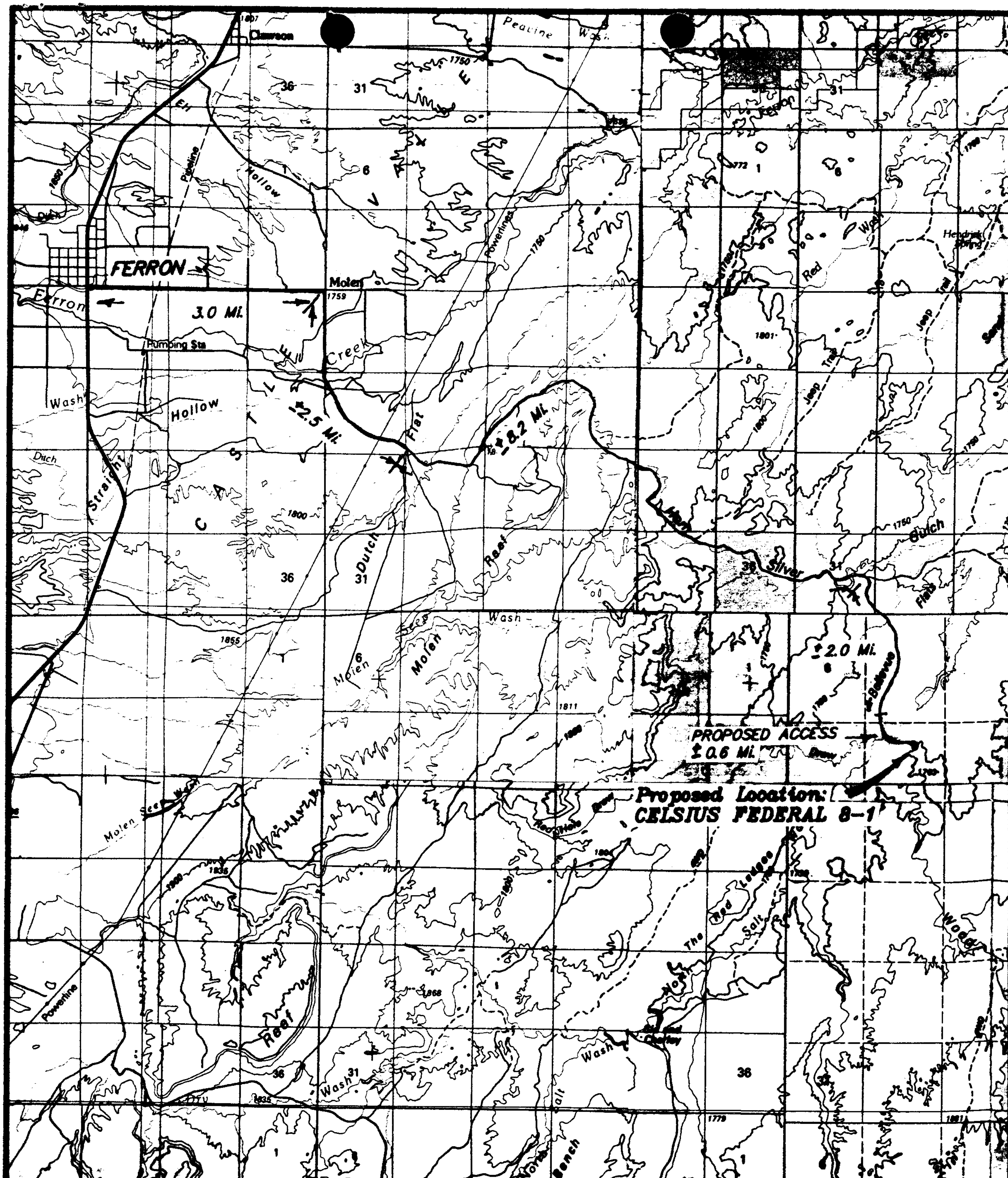
STATION 0+00.00

APPROXIMATE YARDAGES

CUT		
(6") Topsoil Stripping	=	567 Cu. Yds.
Pit Volume (Below Grade)	=	1,176 Cu. Yds.
Remaining Location	=	4,243 Cu. Yds.
TOTAL CUT	=	5,986 CU.YDS.
FILL	=	4,569 CU.YDS.

EXCESS MATERIAL AFTER 5% COMPACTION	=	1,177 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	=	1,155 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation)	=	22 Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING
P.O. Box 1758 Vernal, Utah



TOPOGRAPHIC

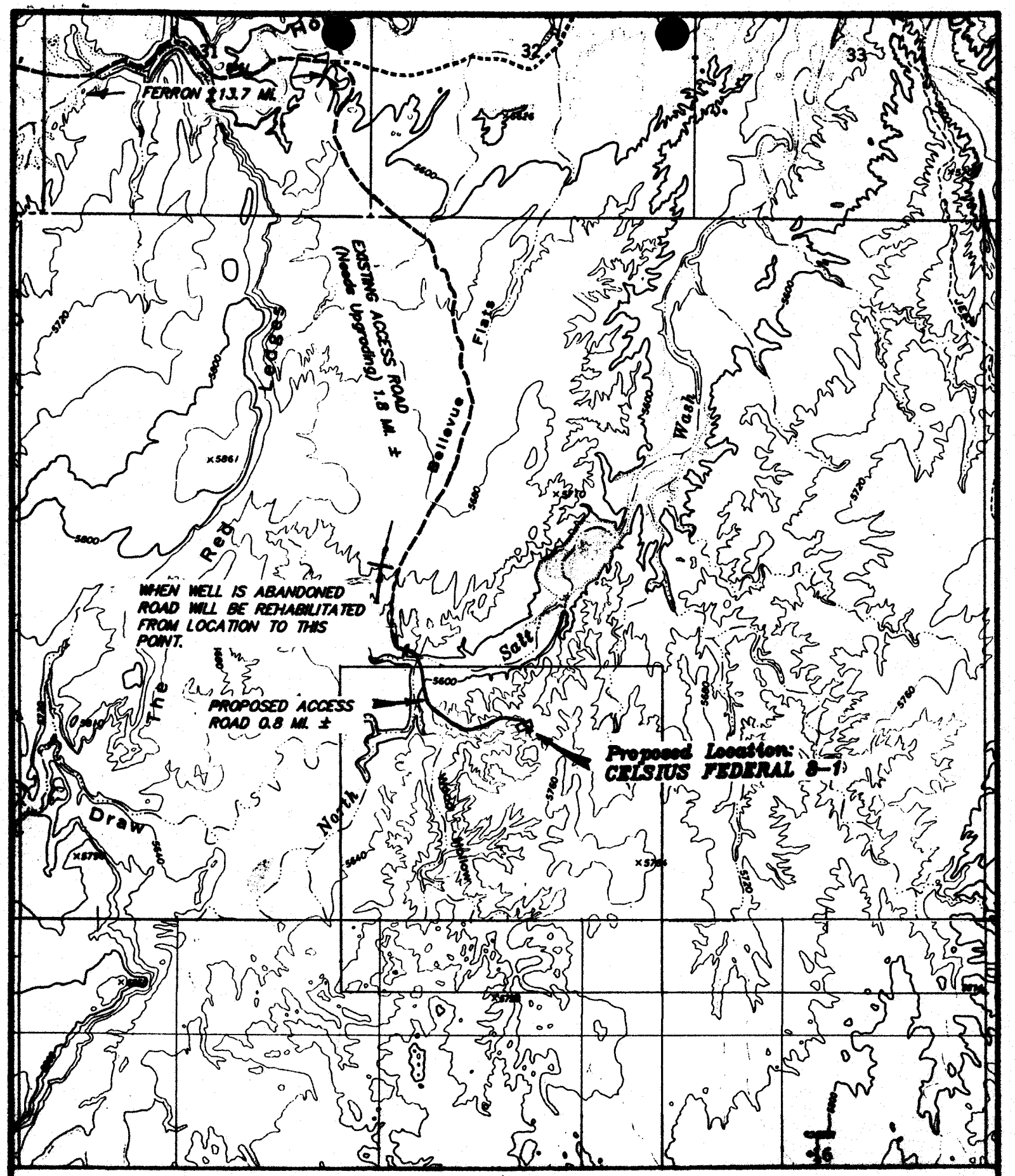
MAP "A"

N

CELSIUS ENERGY CO.

CELSIUS FEDERAL 8-1

SECTION 8, T21S, R9E, S.L.B.&M.



TOPOGRAPHIC MAP "B"

SCALE: 1" = 2000'

N

CELSIUS ENERGY CO.

CELSIUS FEDERAL 8-1

SECTION 8, T21S, R9E, S.L.B.&M.

OPERATOR Celsius Energy Co. (N4850) DATE 8-28-89

WELL NAME Celsius Fed. 8-1

SEC NWNE 8 T 21S R 9E COUNTY Emery

43-015-30232	Federal
API NUMBER	TYPE OF LEASE

CHECK OFF:

☑ PLAT	☑ BOND	☑ NEAREST WELL
☑ LEASE	☑ FIELD	☑ POTASH OR OIL SHALE

PROCESSING COMMENTS:

No other well within 920'

Need Water Permit

RDCC 8-29-89 / Process 9-13-89

Archaeological Survey performed 5-29-89. (#U89-LA-267b)

Exception loc. requested 8-29-89 / Received 9-1-89.

APPROVAL LETTER:

SPACING: ☐ R615-2-3 N/A (UNIT) ☐ R615-3-2

☐ N/A (CAUSE NO. & DATE) ☑ R615-3-3

STIPULATIONS:

1. Water Permit

0218T

CELSIUS ENERGY COMPANY

1125 SEVENTEENTH STREET, #2240 • DENVER, COLORADO 80202 • PHONE (303) 296-8945

August 30, 1989

Utah Division of Oil, Gas & Mining
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Attention: Lisha Romero

Re: Exception Location
Celsius Federal No. 801 Well
T-21-S, R-9-E, S.P.M.
Section 8: 944' FNL,
2221' FEL (NW¼NW¼)
Emery County, Utah

Gentlemen:

Celsius Energy Company is preparing to drill the Celsius Federal No. 8-1 well at the above location which is 84' south and 41' west of being within the permitted "window" for oil and gas wells in accordance with Rule 302.

Celsius hereby requests your approval of the referenced location as an exception to Rule 302. A plat reflecting the legal location window, the staked location, and the 460' "Notice" circle along with a survey plat are enclosed for your reference. As you can see from the plat, Celsius is the only working interest owner within 460' of the location. All of Section 8, T21S, R9E, SLM is subject to Federal Oil and Gas Lease U-64425 which Celsius owns 100%.

We will appreciate receiving your approval of our exception location at your earliest convenience.

Thank you for your cooperation in this regard.

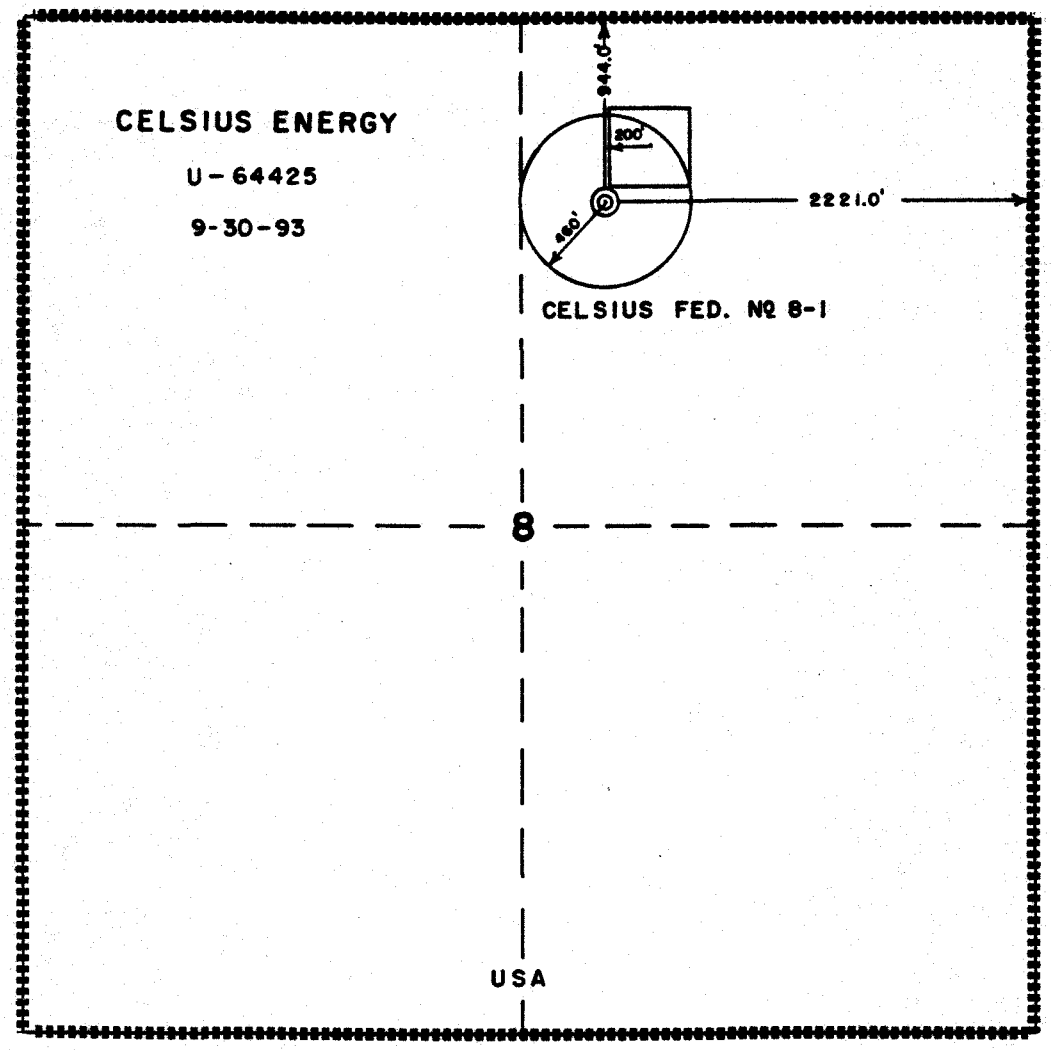
Sincerely,

J. B. Neese
Senior Landman

JBN/kgt

Enclosure

RECEIVED
SEP 01 1989
DIVISION OF
OIL, GAS & MINING



LEASE PLAT

SALT WASH AREA

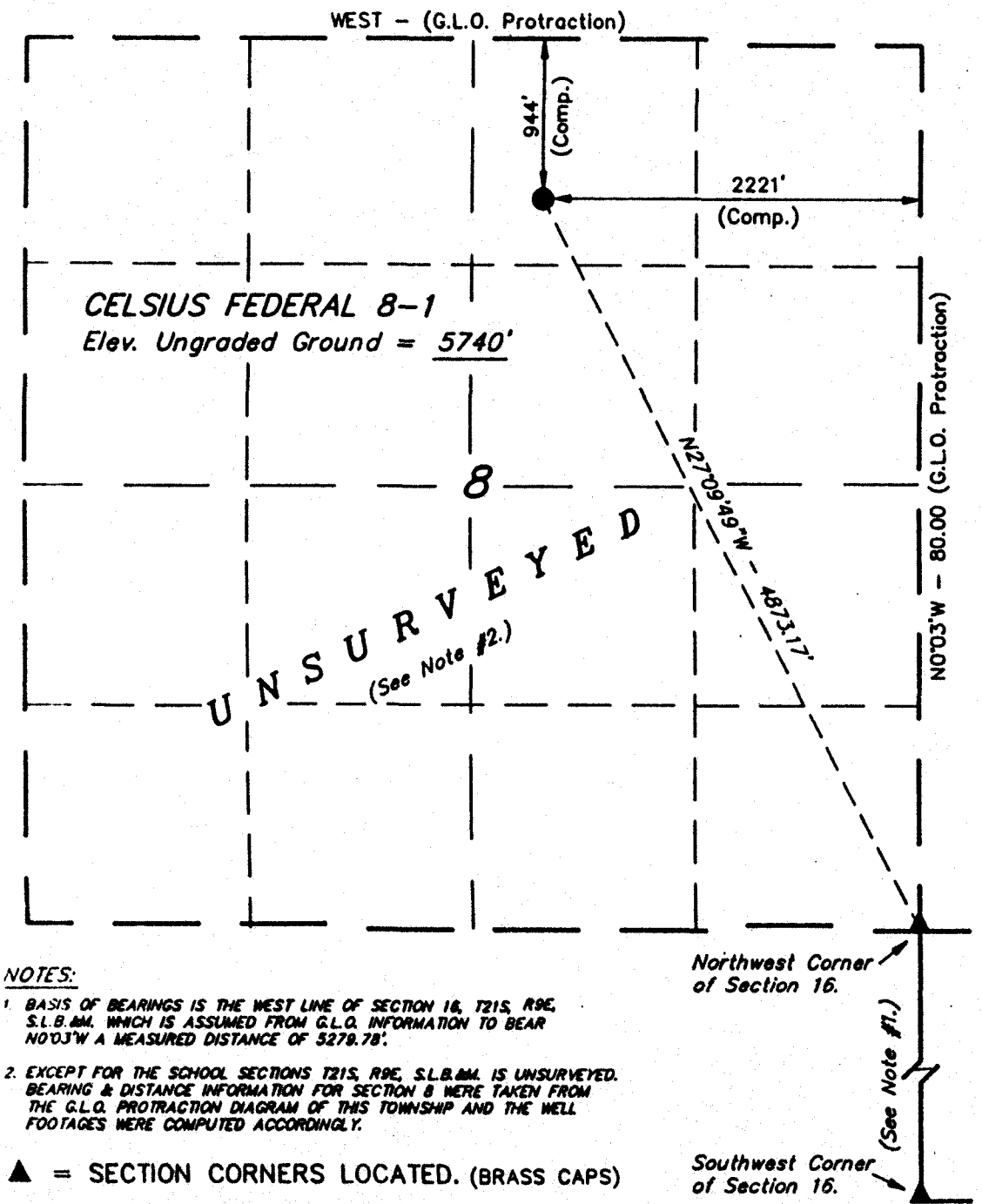
NWNE SEC. 8, T21S, R9E S.L.B.& M.

EMERY COUNTY, UTAH

CELSIUS ENERGY CO.

Well location, CELSIUS FEDERAL 8-1, located as shown in the NW 1/4 NE 1/4 of Section 8, T21S, R9E, S.L.B.&M. Emery County, Utah.

T21S, R9E, S.L.B.&M.



NOTES:

1. BASIS OF BEARINGS IS THE WEST LINE OF SECTION 16, T21S, R9E, S.L.B.&M. WHICH IS ASSUMED FROM G.L.O. INFORMATION TO BEAR N0°03'W A MEASURED DISTANCE OF 5279.78'.
2. EXCEPT FOR THE SCHOOL SECTIONS T21S, R9E, S.L.B.&M. IS UNSURVEYED. BEARING & DISTANCE INFORMATION FOR SECTION 8 WERE TAKEN FROM THE G.L.O. PROTRACTION DIAGRAM OF THIS TOWNSHIP AND THE WELL FOOTAGES WERE COMPUTED ACCORDINGLY.

▲ = SECTION CORNERS LOCATED. (BRASS CAPS)

BASIS OF ELEVATION

SPOT ELEVATION ON A RIDGE TOP IN THE SE 1/4 OF SECTION 8, T21S, R9E, S.L.B.&M. TAKEN FROM THE HORN SILVER GULCH QUADRANGLE, UTAH, EMERY COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5784 FEET.

N

RECEIVED
SEP 01 1989
DIVISION OF OIL, GAS & MINING

CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 5709
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
P. O. BOX 1758 - 86 SOUTH - 200 EAST
VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 5-30-89
PARTY R.L.K. B.M. J.R.S.	REFERENCES G.L.O. PLAT
WEATHER WARM	FILE CELSIUS ENERGY CO.

CELSIUS ENERGY COMPANY

1125 SEVENTEENTH STREET, #2240 • DENVER, COLORADO 80202 • PHONE (303) 296-8945

September 5, 1989

Utah Division of Oil, Gas & Mining
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Attention: Lisha Romero

Re: Celsius Federal Well 8-1
NWNW 8, 21S, 9E
Emery County, Utah
BOP equipment revision

Dear Ms. Romero:

Please find enclosed the corrected (2000 psi) schematic and blowout prevention equipment list for Celsius Federal Well No. 8-1. An incorrect version (3000 psi) of the aforementioned equipment was submitted with the APD for this well, please disregard the original version.

If you should have any further questions or concerns please contact me.

Very truly yours,

Douglas S. Smith
Coordinator, Regulatory Affairs

DSS/kgt

Well ____________ ____________ Casing

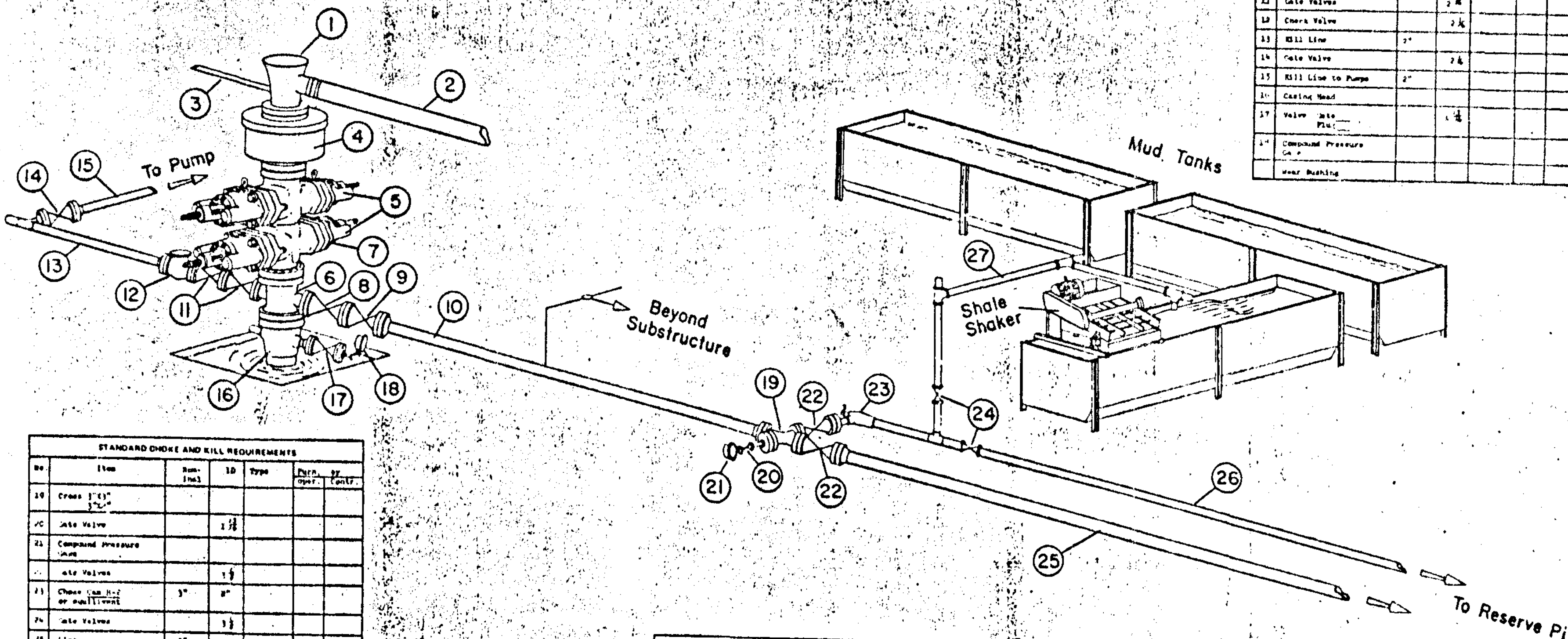
Contractor and operator to furnish items checked(x)

STANDARD STACK REQUIREMENTS						
No.	Item	Nominal	ID	Type	Furn. by	
					Oper.	Contr.
1	Drilling Nipple					
2	Flowline					
3	Fill up Line	2"	[illegible]			
4	Annular Preventer			Hydril Cameron Shaffer		
5	Two Single or one Dual Hyd oper rams.			U.Cam. F.LaB. B.I		
6	Drilling Spool with 3" and 2" outlets			Forged		
7	As Alternate to (6) Run and Kill and Choke lines from outlets in this ram					
8	Gate Valve		3 1/8			
9	Valve-hydraulically operated (Gate)		3 1/8			
10	Choke Line	3"				
11	Gate Valves		2 1/16			
12	Check Valve		2 1/16			
13	Kill Line	2"				
14	Gate Valve		2 1/16			
15	Kill Line to Pumps	2"				
16	Casing Head					
17	Valve Gate ___ Plug ___		2 1/16			
18	Compound Pressure Gage					
	Wear Bushing					

SPECIAL STACK REQUIREMENTS				

MOUNTAIN FUEL SUPPLY COMPANY

2000 psi BLOWOUT PREVENTION EQUIPMENT



STANDARD CHOKE AND KILL REQUIREMENTS						
No.	Item	Nominal	ID	Type	Furn. by	
					Oper.	Contr.
19	Cross 3"x3" 3"x2"					
20	Gate Valve		3 1/8			
21	Compound Pressure Gage					
22	Gate Valves		3 1/8			
23	Choke Cam H-2 or equivalent	3"	2"			
24	Gate Valves		3 1/8			
25	Line	3"				
26	Line	3"				
27	Line	3"				

SPECIAL CHOKE AND KILL REQUIREMENTS				

Norman H. Bangerter
Governor
Dee C. Hansen
Executive Director
Dianne R. Nielson, Ph.D.
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

September 18, 1989

Celsius Energy Company
1125 17th Street, Suite 2240
Denver, Colorado 80202

Gentlemen:

Re: Celsius Fed. 8-1 - NW NE Sec. 8, T. 21S, R. 9E - Emery County, Utah
944' FNL, 2221' FEL

Approval to drill the referenced well is hereby granted in accordance with Rule R615-3-3, Oil and Gas Conservation General Rules, subject to the following stipulation:

1. Prior to commencement of drilling, receipt by the Division of evidence providing assurance of an adequate and approved supply of water as required by Chapter 3, Title 73, Utah Code Annotated.

In addition, the following actions are necessary to fully comply with this approval:

1. Spudding notification within 24 hours after drilling operations commence.

2. Submittal of an Entity Action Form within five working days following spudding and whenever a change in operations or interests necessitates an entity status change.

3. Submittal of the Report of Water Encountered During Drilling, Form 7.

4. Prompt notification if it is necessary to plug and abandon the well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695, or Jim Thompson, Lead Inspector, (Home) 298-9318.

5. Compliance with the requirements of Rule R615-3-20, Gas Flaring or Venting, Oil and Gas Conservation General Rules.

6. Prior to commencement of the proposed drilling operations, plans for facilities for disposal of sanitary wastes at the drill site shall be submitted to the local health department. These drilling operations and any subsequent well operations must be conducted in accordance with applicable state and local health department regulations. A list of local health departments and copies of applicable regulations are available from the Division of Environmental Health, Bureau of General Sanitation, telephone (80l) 538-6121.

7. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-015-30232.

Sincerely,

R. J. Firth
Associate Director, Oil & Gas

lcr
Enclosures
cc: Bureau of Land Management
D. R. Nielson
J. L. Thompson
WE14/1-2

43-015-30232

LCR

Form 3160-3
(November 1983)
(Formerly 9-331C)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: U-64425

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: —

7. UNIT AGREEMENT NAME: —

8. FARM OR LEASE NAME: Celsius Federal

9. WELL NO.: 8-1

10. FIELD AND POOL, OR WILDCAT: Salt Wash

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 8 - T21S-R9E SLM

12. COUNTY OR PARISH: Emery

13. STATE: Utah

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [X] GAS WELL [X] OTHER — SINGLE ZONE [X] MULTIPLE ZONE [ ]

RECEIVED
SEP 25 1989
DIVISION OF OIL, GAS & MINING

2. NAME OF OPERATOR: Celsius Energy Company

3. ADDRESS OF OPERATOR: 1125 17th Street, Ste. #2240, Denver, Colorado 80202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 2221' FEL, 944' FNL, NW/4 NE/4
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: Approximately 17 miles South & West of Ferron, Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
944'	2539	NA
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
2,790'	3,600'	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): Ungraded Ground = 5740'

22. APPROX. DATE WORK WILL START*: Sept. 15, 1989

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
* 12-1/4"	9-5/8"	36	200'	108 Sacks
8-3/4"	5-1/2"	15.5	3600'	~~888~~ Sacks

*See Attachments

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED A.R. Logan TITLE Manager-Operations DATE 8/2/89

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY /s/ Kenneth V. Rhea TITLE ACTING DISTRICT MANAGER DATE SEP 22 1989

CONDITIONS OF APPROVAL, IF ANY:

CONDITIONS OF APPROVAL ATTACHED

SUBJECT TO RIGHT OF WAY APPROVAL

FLARING OR VENTING OF GAS IS SUBJECT TO NTL 4-A Dated 1/1/80

*See Instructions On Reverse Side

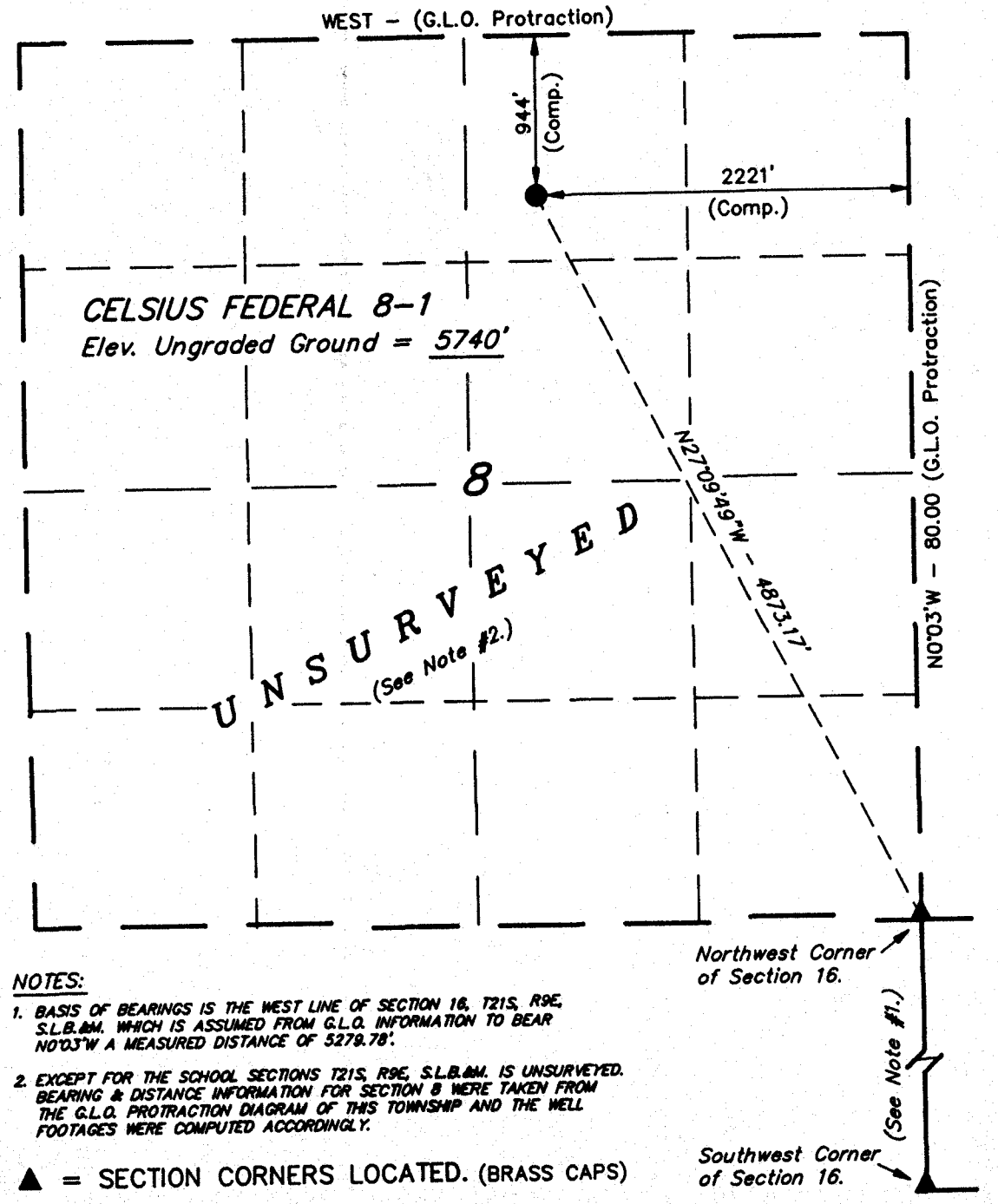
Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

DOGM

CELSIUS ENERGY CO.

Well location, CELSIUS FEDERAL 8-1, located as shown in the NW 1/4 NE 1/4 of Section 8, T21S, R9E, S.L.B.&M. Emery County, Utah.

T21S, R9E, S.L.B.&M.



NOTES:

1. BASIS OF BEARINGS IS THE WEST LINE OF SECTION 16, T21S, R9E, S.L.B.&M. WHICH IS ASSUMED FROM G.L.O. INFORMATION TO BEAR N0°03'W A MEASURED DISTANCE OF 5279.78'.
2. EXCEPT FOR THE SCHOOL SECTIONS T21S, R9E, S.L.B.&M. IS UNSURVEYED. BEARING & DISTANCE INFORMATION FOR SECTION 8 WERE TAKEN FROM THE G.L.O. PROTRACTION DIAGRAM OF THIS TOWNSHIP AND THE WELL FOOTAGES WERE COMPUTED ACCORDINGLY.

▲ = SECTION CORNERS LOCATED. (BRASS CAPS)

BASIS OF ELEVATION

SPOT ELEVATION ON A RIDGE TOP IN THE SE 1/4 OF SECTION 8, T21S, R9E, S.L.B.&M. TAKEN FROM THE HORN SILVER GULCH QUADRANGLE, UTAH, EMERY COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5784 FEET.

CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Robert L. Kay

REGISTERED LAND SURVEYOR
REGISTRATION NO. 5709
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
P. O. BOX 1758 - 85 SOUTH - 200 EAST
VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 5-30-89
PARTY R.L.K. B.M. J.R.S.	REFERENCES G.L.O. PLAT
WEATHER WARM	FILE CELSIUS ENERGY CO.

STANDARD STACK REQUIREMENTS

Nº	ITEM	NOMINAL	ID	TYPE	FURNISHED BY	
					OPER.	CONTR.
1	Drilling Nipple (Rotating Head when air drilling)					
2	Flowline					
3	Fill up Line (eliminated for air drilling)	2"				
4	Annular Preventer			Hydril Cameron Shaffer		
5	Two Single or One dual Hydril oper rams.			U:ORC; F:LWS; B.E.		
6	Drilling spool with 3" and 2" outlets			Forged		
7	As Alternate to (6) Run & Kill and Choke lines from outlets in this ram					
8	Gate Valve		3-1/8			
9	Valve-hydraulically operated (Gate)		3-1/8			
10	Choke Line	3"				
11	Gate Valves		2-1/16			
12	Check Valve		2-1/16			
13	Kill Line	2"				
14	Gate Valve		2-1/16			
15	Kill Line to Pumps	2"				
16	Casing Head					
17	Valve Gate ____ Plug ____		1-13/16			
18	Compound Pressure Cage					
	Wear Bushing					

STANDARD CHOKE AND KILL REQUIREMENTS

Nº	ITEM	NOMINAL	ID	TYPE	FURNISHED BY	
					OPER.	CONTR.
19	Cross 3" X 3" 3" X 2"					
20	Gate Valve		1-13/16			
21	Compound Pressure Gage					
22	Gate Valves		3-1/8			
23	Choke Cam H-2 or equilivent	3"	2"			
24	Gate Valves		3-1/8"			
25	Line	3"				
26	Line	3"				
27	Line	3"				

RECEIVED
SEP 25 1989
DIVISION OF
OIL, GAS & MINING

Celsius Energy Company
Well No. Celsius Federal 8-1
Sec. 8, T. 21 S., R. 9 E.
Emery County, Utah
Lease No. U-64425

CONDITIONS OF APPROVAL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Be advised that Celsius Energy Company is considered to be the operator of the above well, and is responsible under the terms and conditions of the lease for the operations conducted on the leased lands.

Bond coverage for this well is provided by Bond No. ES0019 (Co-Principal-Celsius Energy Company) via surety consent as provided for in 43 CFR 3104.3.

This office will hold the aforementioned operator and bond liable until the provisions of 43 CFR 3106.7-2 continuing responsibility are met.

A. DRILLING PROGRAM

All lease operations will be conducted in full compliance with applicable regulations (43 CFR 3100), Onshore Oil and Gas Order No. 1, Onshore Oil and Gas Order No. 2 and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions and the approved plan will be made available to the field representative to insure compliance.

The operator will contact the San Rafael Resource Area at (801) 637-4584, 48 hours prior to beginning any dirt work on this location. No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the District Office. If operations are to be suspended, prior approval of the District Office will be obtained and notification given before resumption of operations.

The spud date will be reported orally to the District Office within a minimum of 24 hours prior to spudding. Written notification in the form of a Sundry Notice (Form 3160-5) will be submitted to the District Office within 24 hours after spudding. If the spudding occurs on a weekend or holiday, the written report will be submitted on the following work day.

Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported to the Area Office in accordance with requirements of NTL-3A.

If a replacement rig is needed for completion operations, a Sundry Notice (Form 3160-5) to that effect will be filed for prior approval from the District Office, and all conditions of this approved plan are applicable during all operations conducted with the replacement rig. In emergency situations, verbal approval to bring on a replacement rig will be approved through the District Office.

Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted to the District Office not later than thirty (30) days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Two copies of all logs, core descriptions, core analyses, well test data, geologic summaries, sample description, and all other surveys or data obtained and complied during the drilling, workover, and/or completion operations, will be filed with Form 3160-4. Samples (cuttings, fluids, and/or gases) will be submitted when requested by the District Manager.

If the well is to be completed for production, the Area Office is to be contacted in order to set up a pre-production conference. When the well is placed in a producing status, the District Office is to be notified by telegram or other written communication within five working days.

Approval to vent/flare gas during initial well evaluation will be obtained from the District Office. This preliminary approval will not exceed 30 days. Approval to vent/flare beyond this initial test period will require District Office approval pursuant to guidelines in NTL-4A.

No well abandonment operations will be commenced without the prior approval of the District Office. In the case of newly-drilled dry holes or failures, and in emergency situations, oral approval will be obtained from the District Office. A Subsequent Report of Abandonment (Form 3160-5) will be sent to the District Office within 30 days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface resortaion. Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the Area Office, or the appropriate surface managing agency. Upon completion of approved plugging, a dry hole marker will be erected in accordance with 43 CFR 3162.6. The top of the marker will be closed or capped. The following minimum information will be permanently placed on the marker: "Fed" or "Ind", as applicable; "Lease Number"; "Well Number"; location of the well by 1/4 1/4 section; township; and range.

B. ADDITIONAL REQUIREMENTS TO THE DRILLING PROGRAM

1. All fresh water aquifers are to be reported to the BLM.

2. The production casing shall be cemented back to surface either during the primary cement job or remedial cementing.

3. A cement bond log shall be run on production casing.

C. Additional Requirements According To Onshore Oil and Gas Order No. 2

- 2000 psi BOP & BOPE:

Annular preventer, or double rams, or two rams with one being blind and one being a pipe ram

Kill line (2 inch minimum)

1 kill line valve (2 inch minimum)

1 choke line valve

2 chokes

Upper kelly cock valve with handle available

Safety valve and subs to fit all drill strings in use

Pressure gauge on choke manifold

2 inch minimum choke line

Fill-up line above the uppermost preventer

- If repair or replacement of the BOPE is required after testing, this work shall be performed prior to drilling out the casing shoe.

- When the BOPE cannot function to secure the hole, the hole shall be secured using cement, retrievable packer or bridge plug packer, bridge plug or other acceptable approved methods to assure safe well conditions.

- Choke Manifold Equipment:

All choke lines shall be straight lines unless turns use tee blocks or are targeted with running tees, and shall be anchored to prevent whip and reduce vibration.

All valves (except chokes) in the kill line, choke manifold and choke line shall be a type that does not restrict the flow (full opening) and that allows a straight through flow.

Pressure gauges in the well control system shall be a type designed for drilling fluid service.

- 2000 psi system - Accumulator Equipment:

Accumulator shall have sufficient capacity to close all BOP's and retain 200 psi above precharge. Nitrogen bottles that meet manufacturer's specifications may be used as the backup to the required independent power source.

Accumulator precharge pressure test: This test shall be conducted prior to connecting the closing unit to the BOP stack and at least once every 6 months.

Power for the closing unit pumps shall be available to the unit at all times so that the pumps shall automatically start when the closing unit manifold pressure has decreased to a pre-set level.

Each BOP closing unit shall be equipped with sufficient number and sizes of pumps so that, with the accumulator system isolated from service, the pumps shall be capable of opening the hydraulically-operated gate valve (if so equipped), plus closing the annular preventer on the smallest size drill pipe to be used within 2 minutes, and obtain a minimum of 200 psi. above specified accumulator precharge pressure.

A manual locking device (i.e., hand wheels) or automatic locking devices shall be installed on all systems of 2M or greater. A valve shall be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve shall be maintained in the open position and shall be closed only when the power source for the accumulator system is inoperative.

- BOP Testing:

Pressure tests on ram type preventers shall be maintained for at least 10 minutes or until requirements of test are met, whichever is longer. If a test plug is utilized, no bleed off of pressure is acceptable. For a test not utilizing a test plug, if a decline in pressure of more than 10 percent in 30 minutes occurs, the test shall be considered to have failed. Valve on casing head below test of BOP stack.

Annular BOP pressure tests shall be maintained at least 10 minutes or until provisions of test are met, whichever is longer.

As a minimum, the above tests shall be performed:

**When initially installed;

**Whenever any seal subject to test pressure is broken;

**Following related repairs; and

**At 30 day intervals.

Valves shall be tested from working pressure side during BOPE tests with all down stream valves open.

When testing the kill line valve(s), the check valve shall be held open or the ball removed.

Pipe and blind rams shall be activated each trip, however, this function need not be performed more than once a day.

A BOPE pit level drill shall be conducted weekly for each drilling crew.

Pressure tests shall apply to all related well control equipment.

All of the above described tests and/or drills shall be recorded in the drilling log.

- Casing and Cementing:

All waiting on cement times shall be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

All casing, except the conductor casing, shall be new or reconditioned and tested used casing that meets or exceeds API standards for new casing.

The surface casing shall be cemented back to surface either during the primary cement job or by remedial cementing.

All of the above described tests shall be recorded in the drilling log.

All indications of usable water shall be reported to the authorized officer prior to running the next string of casing of before plugging orders are requested, whichever occurs first.

Surface casing shall have centralizers on at least the bottom three joints depending on the severity of hole inclination.

Top plugs shall be used to reduce contamination of cement by displacement fluid. A bottom plug or other acceptable technique, such as a suitable preflush fluid, inner string cement method.,etc. shall be utilized to help isolate the cement from contamination by the mud fluid being displaced ahead of the cement slurry.

All casing strings below the conductor shall be pressure tested to 0.22 psi/ft. of casing string length or 1500 psi, whichever is greater, but not to exceed 70 percent of the minimum internal yield. If pressure declines more than 10 percent in 30 minutes, corrective action shall be taken.

- Mud Program Requirements:

The characteristics, use and testing of drilling mud and the implementation of related drilling procedures shall be designed to prevent the loss of well control. Sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring well control.

-Record slow pump speed on daily drilling report after mudding up.

-Visual mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume.

-A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

-All flare systems shall be designed to gather and burn all gas. The flare line(s) discharge shall be located not less than 100 feet from the well head, having straight lines unless turns are targeted with running tees, and shall be positioned downwind of the prevailing wind direction and shall be anchored. The flare system shall have an effective method for ignition. Where non-combustible gas is likely or expected to be vented, the system shall be provided supplemental fuel for ignition and to maintain a continuous flare.

- Drill Stem Testing Requirements:

Initial opening of drill stem test tools shall be restricted to daylight hours unless specific approval to start during other hours is obtained from the authorized officer. However, DSTs may be allowed to continue at night if the test was initiated during daylight hours and the rate of flow is stabilized and if adequate lighting is available (i.e.,lighting which is adequate for visibility and vapor-proof for safe operations). Packers can be released, but tripping shall not begin before daylight, unless prior approval is obtained from the authorized officer. Closed chamber DSTs may be accomplished day or night.

-A DST that flows to the surface with evidence of hydrocarbons shall be either reversed out of the testing string under controlled surface conditions, or displaced into the formation prior to pulling the test tool. This would involve providing some means for reverse circulation.

-Separation equipment required for the anticipated recovery shall be properly installed before a test starts.

-All engines within 100 feet of the wellbore that are required to "run" during the test shall have spark arresters or water cooled exhausts.

- Special Drilling Operations:

In addition to the equipment already specified elsewhere in Onshore Order No. 2 , the following equipment shall be in place and operational during air/gas drilling:

-Properly lubricated and maintained rotating head;

-Spark arresters on engines or water cooled exhaust;

-Blooie line discharge 100 feet from well bore and securely anchored;

-Straight run on blooie line unless otherwise approved;

-Deduster equipment;

-All cuttings and circulating medium shall be directed into a reserve or blooie pit;

-Float valve above bit;

-Automatic igniter or continuous pilot light on the blooie line;

-Compressors located in the opposite direction from the blooie line a minimum of 100 feet from the well bore;

-Mud circulating equipment, water, and mud materials (does not have to be premixed) sufficient to maintain the capacity of the hole and circulating tanks or pits.

Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.
U-64425

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

RECEIVED
SEP 25 1989
DIVISION OF OIL, GAS & MINING

1. OIL WELL [X] GAS WELL [X] OTHER

7. UNIT AGREEMENT NAME

2. NAME OF OPERATOR
Celsius Energy Company

8. FARM OR LEASE NAME
Celsius Federal

3. ADDRESS OF OPERATOR
1125 17th Street, #2240, Denver, CO 80202

9. WELL NO.
8-1

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
2221' FEL, 944' FNL, NW NE

10. FIELD AND POOL, OR WILDCAT
Salt Wash

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
8 - 21S - 9E SLM

43-015-30232

14. PERMIT NO.
N/A

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
5740' Ungraded

12. COUNTY OR PARISH
Emery

13. STATE
Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF		PULL OR ALTER CASING		WATER SHUT-OFF		REPAIRING WELL	
FRACTURE TREAT		MULTIPLE COMPLETE		FRACTURE TREATMENT		ALTERING CASING	
SHOOT OR ACIDIZE		ABANDON*		SHOOTING OR ACIDIZING		ABANDONMENT*	
REPAIR WELL		CHANGE PLANS	X	(Other)			
(Other)							

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS: (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

The following revisions are being proposed/requested for the casing program for Celsius Federal Well No. 8-1, Salt Wash Area, due to revisions that were made to the original TD Depths on the APD:

Size of Hole	Size of Casing	Weight/Ft.	Setting Depth	Quantity of Cement
12-1/4"	8-5/8"	24	200'	145 Sacks
7-7/8"	4-1/2"	9.5	2950'	570 Sacks

Surface Casing (145 Sx of API Class "G" cement w/3% $CaCl_2$)

Production Casing (330 Sx of 65/35 Lite Cement
240 Sx of 50/50 poz mix w/10% Salt)

OIL AND GAS	
DRN	RJF
1- JRB ✓	GLH
DTS	SLS
2-TAS	
3- MICROFILM	
4- FILE	

18. I hereby certify that the foregoing is true and correct

SIGNED Douglas S. Smyth TITLE Coordinator-Regulatory Affairs DATE 9-12-89

(This space for Federal or State office use)

APPROVED BY /s/ Kenneth V. Rhea TITLE ACTING DISTRICT MANAGER DATE SEP 22 1989

CONDITIONS OF APPROVAL, IF ANY:

APPROVE w/APD AS AN AMENDMENT: dlj 9/19/89

ACCEPTED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE: 9-29-89
BY: [signature]

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

DIVISION OF OIL, GAS AND MINING

API NO. 43-015-30232

SPUDDING INFORMATION

NAME OF COMPANY: CELSUIS ENERGY COMPANY

WELL NAME: CELSUIS FEDERAL 8-1

SECTION NWNE 8 TOWNSHIP 21S RANGE 9E COUNTY EMERY

DRILLING CONTRACTOR VECO

RIG # 4

SPUDDED: DATE 11/6/89

TIME 6:00a.m.

HOW ROTARY

DRILLING WILL COMMENCE HAD TO CALL FOR SPUD INFORMATION

REPORTED BY HOWARD

TELEPHONE # 530-2586

DATE 11/16/89 SIGNED TAS

Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.: U-64425

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: —

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

RECEIVED
NOV 27 1989
DIVISION OF OIL, GAS & MINING

1. OIL WELL [X] GAS WELL [X] OTHER

7. UNIT AGREEMENT NAME: —

2. NAME OF OPERATOR: Celsius Energy Company

8. FARM OR LEASE NAME: Celsius Federal

3. ADDRESS OF OPERATOR: 1125 17th Street, #2240, Denver, Colorado 80202

9. WELL NO.: 8-1

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface: 2221' FEL, 944' FNL, NW NE

10. FIELD AND POOL, OR WILDCAT: Salt Wash

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 8-21S-9E SLM

14. PERMIT NO.: 43-015-30232

15. ELEVATIONS (Show whether DF, RT, GR, etc.): GR 5730.80'

12. COUNTY OR PARISH: Emery

13. STATE: Utah

16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF		PULL OR ALTER CASING		WATER SHUT-OFF		REPAIRING WELL	
FRACTURE TREAT		MULTIPLE COMPLETE		FRACTURE TREATMENT		ALTERING CASING	
SHOOT OR ACIDIZE		ABANDON*		SHOOTING OR ACIDIZING		ABANDONMENT*	
REPAIR WELL		CHANGE PLANS		(Other) Notice of Spud			X
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

The above well was spudded at 6:00 am 11-6-89 by VECO Drilling Rig #4. The 8-5/8" OD, 24#, K-55, 8rd ST&C surface casing was landed at 217.00' KBM and cemented with 145 sacks of API Class "G" cement with 3% Calcium Chloride, 1/4 pound per sack Cellophane Flake, 1/4 pound per sack Quickseal and 2% Calseal. There were full returns while mixing and displacing the cement. A total of 8 bbls of slurry was returned to surface. Cement in plact at 3:30 am 11-7-89.

OIL AND GAS	
DRN	RJF
JRB	GLH
DTS	SLS
1-TAS	
MICROFILM	
2- FILE	

18. I hereby certify that the foregoing is true and correct

SIGNED Howard R. Leupp TITLE Sr. Petroleum Engineer DATE 11/20/89

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

REPORT NO. 113882

PAGE NO. 1

TEST DATE: 17-NOV-1989

S T A R™

A Schlumberger Transient Analysis Report
Of A Schlumberger Drillstem Test

Company: CELSIUS ENERGY

Well: CELSIUS FEDERAL 8-1

TEST IDENTIFICATION

Test Type ..... MFE OH DST
Test No. 1
Formation ..... SINBAD LIMESTN
Test Interval (ft) ... 2655 - 2685
Reference Depth ..... KELLY BUSHING

WELL LOCATION

Field .....
County ..... EMERGY
State ..... UTAH
Sec/Twn/Rng S8T21SR9E
Elevation (ft) 5752

HOLE CONDITIONS

Total Depth (MD/TUD)(ft) . 2685
Hole Size (in) 7 7/8
Casing/Liner I.D. (in) ...
Perf'd Interv./Nt Pay(ft). -- / 17
Shot Density/Diameter(in).

MUD PROPERTIES

Mud Type ..... LSND
Mud Weight (lb/gal) 8.7
Mud Resistivity (ohm.m) .. 10 @ 60 DEG. F.
Filtrate Resistiv.(ohm.m). 10 @ 60 DEG. F.
Filtrate Chlorides (ppm) . 240

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi). 1218
Gas Cushion Type ..... NONE
Surface Pressure (psi) ... --
Liquid Cushion Type ..... NONE
Cushion Length (ft) ..... --

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D.(in). 2064 / 3.8
Collar Length ft/I.D.(in). 546 / 2.25
Packer Depths (ft) 2655
Bottomhole Choke Size(in). 15/16
Gauge Depth (ft)/Type .... 2625 / MECHANICAL

NET PIPE RECOVERY

Volume	Fluid Type	Properties
NONE		

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
1840 CC	MUD	10 @ 60 DEG. F.
		240 PPM CL.
Press. 1	GOR:	GLR:

VALIDATION RESULTS

Model of Behavior .....
Fluid Type Used .....
Reservoir Pressure (psi) .
Transmissivity (md.ft/cp)
Permeability (md) .....
Skin Factor/Damage Ratio .
Storativity Ratio .....
Interporosity Flow Coeff..
Distance to Anomaly (ft).
Investigation Radius (ft).
Potentiometric Surf. (ft).

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API) ...
Basic Solids (%) .....
Gas Gravity .....
Water Cut (%) .....
Viscosity (cp) .....
Tot. Compress. (1/psi) ...
Porosity (%) ..... 2 - 3
Reservoir Temperature (F). 86
Form.Vol.Factor (bbl/STB).

PRODUCTION RATE DURING TEST: -

COMMENTS:

REPORT NO. 113882
PAGE NO. 2

SEQUENCE OF EVENTS

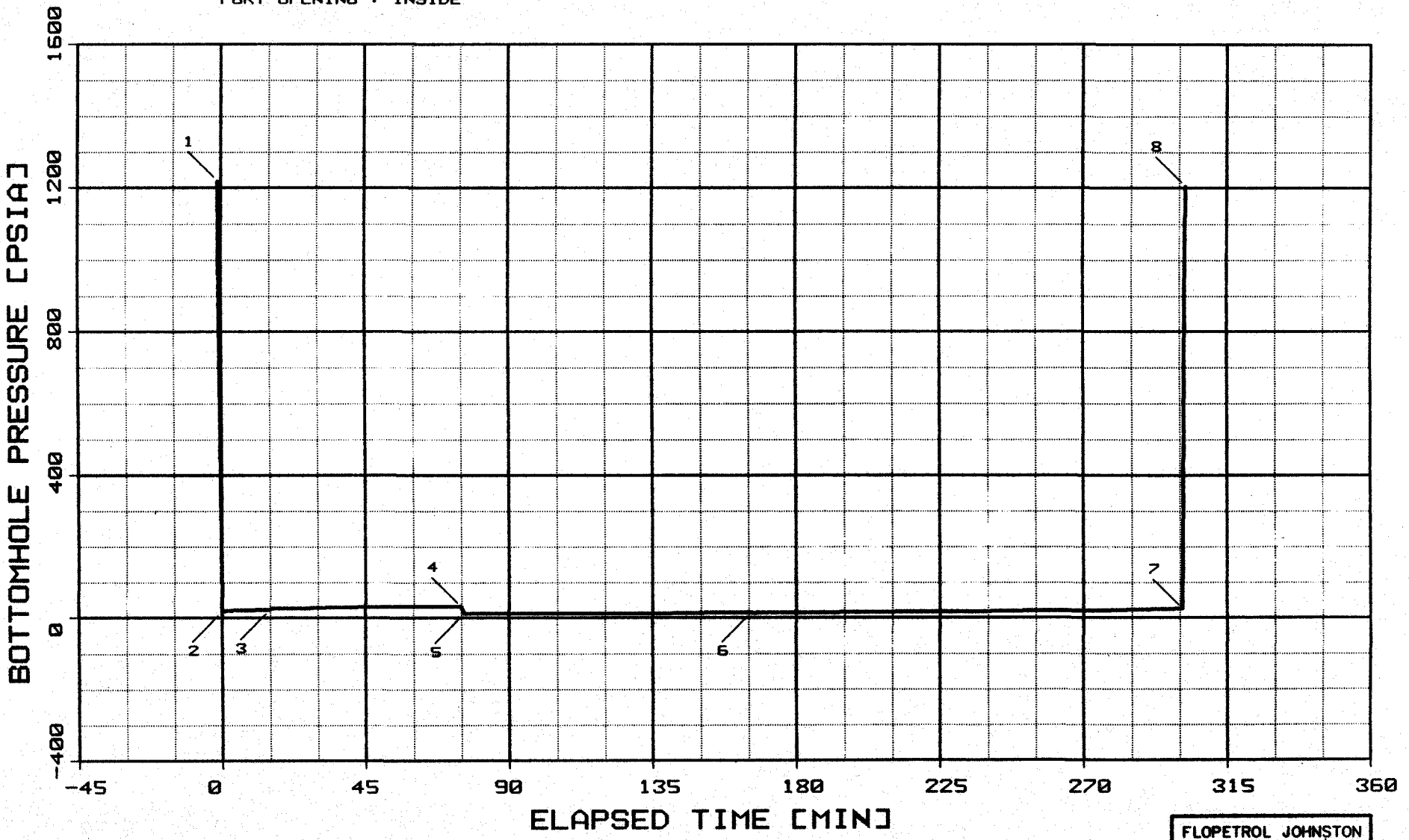
Schlumberger

EVENT NO.	DATE	TIME (HR:MIN)	DESCRIPTION	ELAPSED TIME (MINS)	BHP (PSIA)	BLOW (IN.-H2O)
1	17-NOV	0704	SET PACKERS	-1.00	1218	
2		0707	OPENED TOOL	0.00	15	VERY WEAK
			VERY WEAK BLOW ON OPENING			
		0712				BLOW DIED
3		0722	CLOSED FOR INITIAL SHUTIN	15.00	22	0
4		0822	FINISHED SHUT-IN	75.00	31	0
5		0826	REOPENED TOOL	76.00	11	NO BLOW
			NO BLOW THROUGHOUT FLOW			
6		0956	CLOSED FOR FINAL SHUT-IN	166.00	14	NO BLOW
7		1211	FINISHED SHUT-IN	301.00	24	0
8		1213	PULLED PACKERS LOOSE	302.00	1205	
			NOTE: NO FILL ON BOTTOM.			
			NO REC'VY IN DRILL STRING			

BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 113882
INSTRUMENT NO. J-1315
DEPTH : 2625 FT
CAPACITY : 0 PSI
PORT OPENING : INSIDE

COMPANY : CELSIUS ENERGY
WELL : CELSIUS FEDERAL 8-1



FLOPETROL JOHNSTON
Schlumberger

****
* WELL TEST DATA PRINTOUT *
****

FIELD REPORT # : 113882

COMPANY : CELSIUS ENERGY
WELL : CELSIUS FEDERAL 8-1

INSTRUMENT # : J-1315
CAPACITY [PSI] : 0.
DEPTH [FT] : 2625.0
PORT OPENING : INSIDE
TEMPERATURE [DEG F] : 86.0

LABEL POINT INFORMATION
****

#	TIME OF DAY HH:MM:SS	DATE DD-MM	EXPLANATION	ELAPSED TIME,MIN	BOT HOLE PRESSURE PSIA
1	7: 6: 0	17-NO	HYDROSTATIC MUD	-1.00	1218
2	7: 7: 0	17-NO	START FLOW	0.00	15
3	7:22: 0	17-NO	END FLOW & START SHUT-IN	15.00	22
4	8:22: 0	17-NO	END SHUT-IN	75.00	31
5	8:23: 0	17-NO	START FLOW	76.00	11
6	9:53: 0	17-NO	END FLOW & START SHUT-IN	166.00	14
7	12: 8: 0	17-NO	END SHUT-IN	301.00	24
8	12: 9: 0	17-NO	HYDROSTATIC MUD	302.00	1205

SUMMARY OF FLOW PERIODS
****

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA
1	0.00	15.00	15.00	15	22
2	76.00	166.00	90.00	11	14

SUMMARY OF SHUTIN PERIODS
****

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	15.00	75.00	60.00	22	31	22	15.00
2	166.00	301.00	135.00	14	24	14	105.00

TEST PHASE : FLOW PERIOD # 1

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
7: 7: 0	17-NO	0.00	0.00	15
7:12: 0	17-NO	5.00	5.00	20
7:17: 0	17-NO	10.00	10.00	21
7:22: 0	17-NO	15.00	15.00	22

TEST PHASE : SHUTIN PERIOD # 1
FINAL FLOW PRESSURE [PSIA] = 22
PRODUCING TIME [MIN] = 15.00

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
7:22: 0	17-NO	15.00	0.00	22	0	
7:23: 0	17-NO	16.00	1.00	26	4	1.204
7:24: 0	17-NO	17.00	2.00	26	4	0.929
7:25: 0	17-NO	18.00	3.00	26	4	0.778
7:26: 0	17-NO	19.00	4.00	26	4	0.677
7:27: 0	17-NO	20.00	5.00	26	4	0.602
7:28: 0	17-NO	21.00	6.00	26	5	0.544
7:29: 0	17-NO	22.00	7.00	26	5	0.497
7:30: 0	17-NO	23.00	8.00	26	5	0.459
7:31: 0	17-NO	24.00	9.00	26	5	0.426
7:32: 0	17-NO	25.00	10.00	26	5	0.398
7:34: 0	17-NO	27.00	12.00	27	5	0.352
7:36: 0	17-NO	29.00	14.00	27	5	0.316
7:38: 0	17-NO	31.00	16.00	28	6	0.287
7:40: 0	17-NO	33.00	18.00	28	7	0.263
7:42: 0	17-NO	35.00	20.00	29	7	0.243
7:44: 0	17-NO	37.00	22.00	29	7	0.226
7:46: 0	17-NO	39.00	24.00	29	7	0.211
7:48: 0	17-NO	41.00	26.00	29	8	0.198
7:50: 0	17-NO	43.00	28.00	29	8	0.186
7:52: 0	17-NO	45.00	30.00	30	8	0.176
7:57: 0	17-NO	50.00	35.00	30	9	0.155
8: 2: 0	17-NO	55.00	40.00	31	9	0.138
8: 7: 0	17-NO	60.00	45.00	31	10	0.125
8:12: 0	17-NO	65.00	50.00	31	10	0.114
8:17: 0	17-NO	70.00	55.00	31	10	0.105
8:22: 0	17-NO	75.00	60.00	31	10	0.097

TEST PHASE : FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
8:23: 0	17-NO	76.00	0.00	11
8:28: 0	17-NO	81.00	5.00	11
8:33: 0	17-NO	86.00	10.00	11
8:38: 0	17-NO	91.00	15.00	11
8:43: 0	17-NO	96.00	20.00	11
8:48: 0	17-NO	101.00	25.00	11
8:53: 0	17-NO	106.00	30.00	11
8:58: 0	17-NO	111.00	35.00	11
9: 3: 0	17-NO	116.00	40.00	11
9: 8: 0	17-NO	121.00	45.00	11
9:13: 0	17-NO	126.00	50.00	11
9:18: 0	17-NO	131.00	55.00	11
9:23: 0	17-NO	136.00	60.00	11
9:28: 0	17-NO	141.00	65.00	12
9:33: 0	17-NO	146.00	70.00	13
9:38: 0	17-NO	151.00	75.00	13
9:43: 0	17-NO	156.00	80.00	14
9:48: 0	17-NO	161.00	85.00	14
9:53: 0	17-NO	166.00	90.00	14

TEST PHASE : SHUTIN PERIOD # 2
FINAL FLOW PRESSURE [PSIA] = 14
PRODUCING TIME [MIN] = 105.00

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
9:53: 0	17-NO	166.00	0.00	14	0	
9:54: 0	17-NO	167.00	1.00	13	-1	2.025
9:55: 0	17-NO	168.00	2.00	14	-1	1.728
9:56: 0	17-NO	169.00	3.00	14	-1	1.556
9:57: 0	17-NO	170.00	4.00	14	-1	1.435
9:58: 0	17-NO	171.00	5.00	14	-1	1.342
9:59: 0	17-NO	172.00	6.00	14	-1	1.267
10: 0: 0	17-NO	173.00	7.00	14	-1	1.204
10: 1: 0	17-NO	174.00	8.00	14	-1	1.150
10: 2: 0	17-NO	175.00	9.00	14	-1	1.103
10: 3: 0	17-NO	176.00	10.00	14	-1	1.061
10: 5: 0	17-NO	178.00	12.00	14	-1	0.989
10: 7: 0	17-NO	180.00	14.00	14	-1	0.929
10: 9: 0	17-NO	182.00	16.00	14	0	0.879
10:11: 0	17-NO	184.00	18.00	14	0	0.835
10:13: 0	17-NO	186.00	20.00	14	0	0.796
10:15: 0	17-NO	188.00	22.00	14	0	0.761
10:17: 0	17-NO	190.00	24.00	14	0	0.730
10:19: 0	17-NO	192.00	26.00	14	0	0.702

TEST PHASE : SHUTIN PERIOD # 2
FINAL FLOW PRESSURE [PSIA] = 14
PRODUCING TIME [MIN] = 105.00

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
10:21: 0	17-NO	194.00	28.00	15	0	0.677
10:23: 0	17-NO	196.00	30.00	15	1	0.653
10:28: 0	17-NO	201.00	35.00	15	1	0.602
10:33: 0	17-NO	206.00	40.00	15	1	0.559
10:38: 0	17-NO	211.00	45.00	16	2	0.523
10:43: 0	17-NO	216.00	50.00	16	2	0.491
10:48: 0	17-NO	221.00	55.00	16	2	0.464
10:53: 0	17-NO	226.00	60.00	16	2	0.439
10:58: 0	17-NO	231.00	65.00	17	3	0.418
11: 3: 0	17-NO	236.00	70.00	17	3	0.398
11: 8: 0	17-NO	241.00	75.00	17	3	0.380
11:13: 0	17-NO	246.00	80.00	18	3	0.364
11:18: 0	17-NO	251.00	85.00	18	4	0.349
11:23: 0	17-NO	256.00	90.00	19	5	0.336
11:28: 0	17-NO	261.00	95.00	19	5	0.323
11:33: 0	17-NO	266.00	100.00	19	5	0.312
11:38: 0	17-NO	271.00	105.00	20	5	0.301
11:43: 0	17-NO	276.00	110.00	20	6	0.291
11:48: 0	17-NO	281.00	115.00	21	7	0.282
11:53: 0	17-NO	286.00	120.00	22	8	0.273
11:58: 0	17-NO	291.00	125.00	23	9	0.265
12: 3: 0	17-NO	296.00	130.00	23	9	0.257
12: 8: 0	17-NO	301.00	135.00	24	10	0.250

REPORT NO. 113882

PAGE NO. 1

TEST DATE: 17-NOV-1989

S T A R™

A Schlumberger Transient Analysis Report

Of A Schlumberger Drillstem Test

Schlumberger

Company: CELSIUS ENERGY

Well: CELSIUS FEDERAL 8-1

TEST IDENTIFICATION

Test Type ..... MFE OH DST
Test No. 1
Formation ..... SINBAD LIMESTN
Test Interval (ft) ... 2655 - 2685
Reference Depth ..... KELLY BUSHING

WELL LOCATION

Field .....
County ..... EMERGY
State ..... UTAH
Sec/Twn/Rng S8T21SR9E
Elevation (ft) 5752

HOLE CONDITIONS

Total Depth (MD/TVD)(ft) . 2685
Hole Size (in) 7 7/8
Casing/Liner I.D. (in) ...
Perf'd Interv./Nt Pay(ft). -- / 17
Shot Density/Diameter(in).

MUD PROPERTIES

Mud Type ..... LSND
Mud Weight (lb/gal) 8.7
Mud Resistivity (ohm.m) .. 10 @ 60 DEG. F.
Filtrate Resistiv.(ohm.m). 10 @ 60 DEG. F.
Filtrate Chlorides (ppm) . 240

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi). 1218
Gas Cushion Type ..... NONE
Surface Pressure (psi) ... --
Liquid Cushion Type ..... NONE
Cushion Length (ft) ..... --

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D.(in). 2064 / 3.8
Collar Length ft/I.D.(in). 546 / 2.25
Packer Depths (ft) 2655
Bottomhole Choke Size(in). 15/16
Gauge Depth (ft)/Type .... 2625 / MECHANICAL

NET PIPE RECOVERY

Volume	Fluid Type	Properties
NONE		

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
1840 CC	MUD	10 @ 60 DEG. F.
		240 PPM CL.
Press. 1	GOR:	GLR:

VALIDATION RESULTS

Model of Behavior .....
Fluid Type Used .....
Reservoir Pressure (psi) .
Transmissivity (md.ft/cp)
Permeability (md) .....
Skin Factor/Damage Ratio .
Storativity Ratio .....
Interporosity Flow Coeff..
Distance to Anomaly (ft).
Investigation Radius (ft).
Potentiometric Surf. (ft).

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API) ...
Basic Solids (%) .....
Gas Gravity .....
Water Cut (%) .....
Viscosity (cp) .....
Tot. Compress. (1/psi) ...
Porosity (%) ..... 2 - 3
Reservoir Temperature (F). 86
Form.Vol.Factor (bbl/STB).

PRODUCTION RATE DURING TEST: -

COMMENTS:

REPORT NO.
113882

PAGE NO. 2

SEQUENCE OF EVENTS

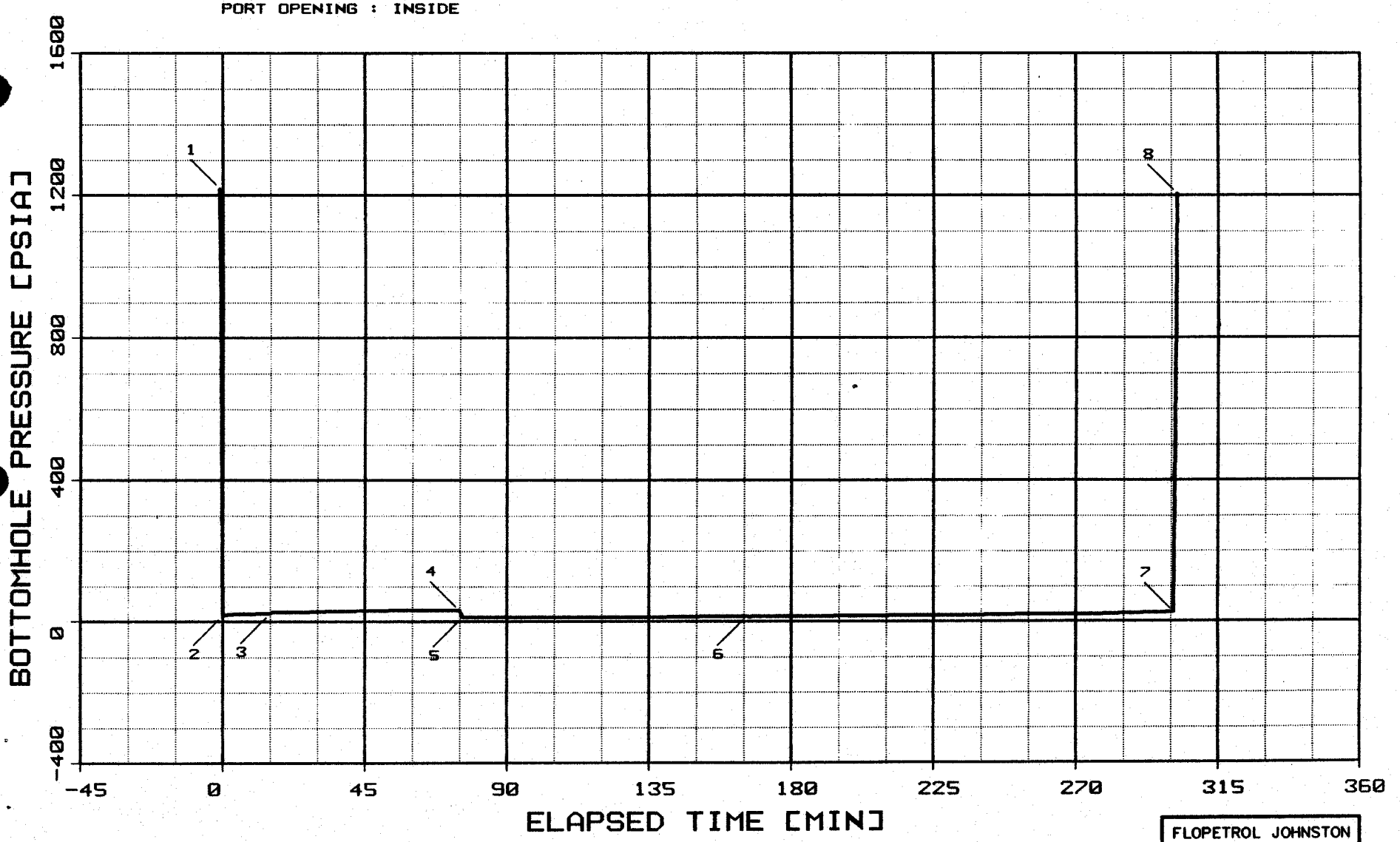
Schlumberger

EVENT NO.	DATE	TIME (HR:MIN)	DESCRIPTION	ELAPSED TIME (MINS)	BHP (PSIA)	BLOW (IN.-H2O)
1	17-NOV	0704	SET PACKERS	-1.00	1218	
2		0707	OPENED TOOL	0.00	15	VERY WEAK
			VERY WEAK BLOW ON OPENING			
		0712				BLOW DIED
3		0722	CLOSED FOR INITIAL SHUTIN	15.00	22	0
4		0822	FINISHED SHUT-IN	75.00	31	0
5		0826	REOPENED TOOL	76.00	11	NO BLOW
			NO BLOW THROUGHOUT FLOW			
6		0956	CLOSED FOR FINAL SHUT-IN	166.00	14	NO BLOW
7		1211	FINISHED SHUT-IN	301.00	24	0
8		1213	PULLED PACKERS LOOSE	302.00	1205	
			NOTE: NO FILL ON BOTTOM.			
			NO REC'VY IN DRILL STRING			

BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 113882
INSTRUMENT NO. J-1315
DEPTH : 2625 FT
CAPACITY : 0 PSI
PORT OPENING : INSIDE

COMPANY : CELSIUS ENERGY
WELL : CELSIUS FEDERAL 8-1



FLOPETROL JOHNSTON
Schlumberger

****
* WELL TEST DATA PRINTOUT *
****

FIELD REPORT # : 113882

COMPANY : CELSIUS ENERGY
WELL : CELSIUS FEDERAL 8-1

INSTRUMENT # : J-1315
CAPACITY [PSI] : 0.
DEPTH [FT] : 2625.0
PORT OPENING : INSIDE
TEMPERATURE [DEG F] : 86.0

LABEL POINT INFORMATION

#	TIME OF DAY HH:MM:SS	DATE DD-MM	EXPLANATION	ELAPSED TIME,MIN	BOT HOLE PRESSURE PSIA
1	7: 6: 0	17-NO	HYDROSTATIC MUD	-1.00	1218
2	7: 7: 0	17-NO	START FLOW	0.00	15
3	7:22: 0	17-NO	END FLOW & START SHUT-IN	15.00	22
4	8:22: 0	17-NO	END SHUT-IN	75.00	31
5	8:23: 0	17-NO	START FLOW	76.00	11
6	9:53: 0	17-NO	END FLOW & START SHUT-IN	166.00	14
7	12: 8: 0	17-NO	END SHUT-IN	301.00	24
8	12: 9: 0	17-NO	HYDROSTATIC MUD	302.00	1205

SUMMARY OF FLOW PERIODS

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA
1	0.00	15.00	15.00	15	22
2	76.00	166.00	90.00	11	14

SUMMARY OF SHUTIN PERIODS

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	15.00	75.00	60.00	22	31	22	15.00
2	166.00	301.00	135.00	14	24	14	105.00

TEST PHASE : FLOW PERIOD # 1

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
7: 7: 0	17-NO	0.00	0.00	15
7:12: 0	17-NO	5.00	5.00	20
7:17: 0	17-NO	10.00	10.00	21
7:22: 0	17-NO	15.00	15.00	22

TEST PHASE : SHUTIN PERIOD # 1
FINAL FLOW PRESSURE [PSIA] = 22
PRODUCING TIME [MIN] = 15.00

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
7:22: 0	17-NO	15.00	0.00	22	0	
7:23: 0	17-NO	16.00	1.00	26	4	1.204
7:24: 0	17-NO	17.00	2.00	26	4	0.929
7:25: 0	17-NO	18.00	3.00	26	4	0.778
7:26: 0	17-NO	19.00	4.00	26	4	0.677
7:27: 0	17-NO	20.00	5.00	26	4	0.602
7:28: 0	17-NO	21.00	6.00	26	5	0.544
7:29: 0	17-NO	22.00	7.00	26	5	0.497
7:30: 0	17-NO	23.00	8.00	26	5	0.459
7:31: 0	17-NO	24.00	9.00	26	5	0.426
7:32: 0	17-NO	25.00	10.00	26	5	0.398
7:34: 0	17-NO	27.00	12.00	27	5	0.352
7:36: 0	17-NO	29.00	14.00	27	5	0.316
7:38: 0	17-NO	31.00	16.00	28	6	0.287
7:40: 0	17-NO	33.00	18.00	28	7	0.263
7:42: 0	17-NO	35.00	20.00	29	7	0.243
7:44: 0	17-NO	37.00	22.00	29	7	0.226
7:46: 0	17-NO	39.00	24.00	29	7	0.211
7:48: 0	17-NO	41.00	26.00	29	8	0.198
7:50: 0	17-NO	43.00	28.00	29	8	0.186
7:52: 0	17-NO	45.00	30.00	30	8	0.176
7:57: 0	17-NO	50.00	35.00	30	9	0.155
8: 2: 0	17-NO	55.00	40.00	31	9	0.138
8: 7: 0	17-NO	60.00	45.00	31	10	0.125
8:12: 0	17-NO	65.00	50.00	31	10	0.114
8:17: 0	17-NO	70.00	55.00	31	10	0.105
8:22: 0	17-NO	75.00	60.00	31	10	0.097

TEST PHASE : FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
8:23: 0	17-NO	76.00	0.00	11
8:28: 0	17-NO	81.00	5.00	11
8:33: 0	17-NO	86.00	10.00	11
8:38: 0	17-NO	91.00	15.00	11
8:43: 0	17-NO	96.00	20.00	11
8:48: 0	17-NO	101.00	25.00	11
8:53: 0	17-NO	106.00	30.00	11
8:58: 0	17-NO	111.00	35.00	11
9: 3: 0	17-NO	116.00	40.00	11
9: 8: 0	17-NO	121.00	45.00	11
9:13: 0	17-NO	126.00	50.00	11
9:18: 0	17-NO	131.00	55.00	11
9:23: 0	17-NO	136.00	60.00	11
9:28: 0	17-NO	141.00	65.00	12
9:33: 0	17-NO	146.00	70.00	13
9:38: 0	17-NO	151.00	75.00	13
9:43: 0	17-NO	156.00	80.00	14
9:48: 0	17-NO	161.00	85.00	14
9:53: 0	17-NO	166.00	90.00	14

TEST PHASE : SHUTIN PERIOD # 2
FINAL FLOW PRESSURE [PSIA] = 14
PRODUCING TIME [MIN] = 105.00

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
9:53: 0	17-NO	166.00	0.00	14	0	
9:54: 0	17-NO	167.00	1.00	13	-1	2.025
9:55: 0	17-NO	168.00	2.00	14	-1	1.728
9:56: 0	17-NO	169.00	3.00	14	-1	1.556
9:57: 0	17-NO	170.00	4.00	14	-1	1.435
9:58: 0	17-NO	171.00	5.00	14	-1	1.342
9:59: 0	17-NO	172.00	6.00	14	-1	1.267
10: 0: 0	17-NO	173.00	7.00	14	-1	1.204
10: 1: 0	17-NO	174.00	8.00	14	-1	1.150
10: 2: 0	17-NO	175.00	9.00	14	-1	1.103
10: 3: 0	17-NO	176.00	10.00	14	-1	1.061
10: 5: 0	17-NO	178.00	12.00	14	-1	0.989
10: 7: 0	17-NO	180.00	14.00	14	-1	0.929
10: 9: 0	17-NO	182.00	16.00	14	0	0.879
10:11: 0	17-NO	184.00	18.00	14	0	0.835
10:13: 0	17-NO	186.00	20.00	14	0	0.796
10:15: 0	17-NO	188.00	22.00	14	0	0.761
10:17: 0	17-NO	190.00	24.00	14	0	0.730
10:19: 0	17-NO	192.00	26.00	14	0	0.702

TEST PHASE : SHUTIN PERIOD # 2
FINAL FLOW PRESSURE [PSIA] = 14
PRODUCING TIME [MIN] = 105.00

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
10:21: 0	17-NO	194.00	28.00	15	0	0.677
10:23: 0	17-NO	196.00	30.00	15	1	0.653
10:28: 0	17-NO	201.00	35.00	15	1	0.602
10:33: 0	17-NO	206.00	40.00	15	1	0.559
10:38: 0	17-NO	211.00	45.00	16	2	0.523
10:43: 0	17-NO	216.00	50.00	16	2	0.491
10:48: 0	17-NO	221.00	55.00	16	2	0.464
10:53: 0	17-NO	226.00	60.00	16	2	0.439
10:58: 0	17-NO	231.00	65.00	17	3	0.418
11: 3: 0	17-NO	236.00	70.00	17	3	0.398
11: 8: 0	17-NO	241.00	75.00	17	3	0.380
11:13: 0	17-NO	246.00	80.00	18	3	0.364
11:18: 0	17-NO	251.00	85.00	18	4	0.349
11:23: 0	17-NO	256.00	90.00	19	5	0.336
11:28: 0	17-NO	261.00	95.00	19	5	0.323
11:33: 0	17-NO	266.00	100.00	19	5	0.312
11:38: 0	17-NO	271.00	105.00	20	5	0.301
11:43: 0	17-NO	276.00	110.00	20	6	0.291
11:48: 0	17-NO	281.00	115.00	21	7	0.282
11:53: 0	17-NO	286.00	120.00	22	8	0.273
11:58: 0	17-NO	291.00	125.00	23	9	0.265
12: 3: 0	17-NO	296.00	130.00	23	9	0.257
12: 8: 0	17-NO	301.00	135.00	24	10	0.250

REPORT NO. 113883

PAGE NO. 1

TEST DATE: 19-NOV-1989

S T A R™

A Schlumberger Transient Analysis Report

Of A Schlumberger Drillstem Test

Schlumberger

Company: CELSIUS ENERGY

Well: CELSIUS FEDERAL 8-1

TEST IDENTIFICATION

Test Type ..... MFE OH DST
Test No. 2
Formation ..... KAIBAB
Test Interval (ft) ... 2934 - 2952
Reference Depth ..... KELLY BUSHING

WELL LOCATION

API #43-015-30939

Field .....
County ..... EMERY
State ..... UTAH
Sec/Twn/Rng S8T21SR9E
Elevation (ft) 5752

HOLE CONDITIONS

Total Depth (MD/TVD)(ft) . 2952
Hole Size (in) 7 7/8
Casing/Liner I.D. (in) ...
Perf'd Interv./Nt Pay(ft). -- / 10
Shot Density/Diameter(in).

MUD PROPERTIES

Mud Type ..... LSND
Mud Weight (lb/gal) 8.8
Mud Resistivity (ohm.m) .. 10 @ 60 DEG. F.
Filtrate Resistiv.(ohm.m). 10 @ 60 DEG. F.
Filtrate Chlorides (ppm) . 240

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi). 1388
Gas Cushion Type ..... NONE
Surface Pressure (psi) ... --
Liquid Cushion Type ..... NONE
Cushion Length (ft) ..... --

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D.(in). 2342 / 3.8
Collar Length ft/I.D.(in). 547 / 2.25
Packer Depths (ft) 2934
Bottomhole Choke Size(in). 15/16
Gauge Depth (ft)/Type .... 2939 / MECHANICAL

NET PIPE RECOVERY

Volume	Fluid Type	Properties
3 FT.	M&GC OIL	10%OIL, 90% MUD
124 FT.	G&OC MUD	RW=10@60D/230 PPM CL
		10% OIL, 90% MUD

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
0.18 SCF	GAS	
400 CC	OIL	S.C. GRINDOUT:
600 CC	WATER	40%OIL, 30%WATER,
		30%MUD
Press. 50	GOR:	GLR:

VALIDATION RESULTS

Model of Behavior .....
Fluid Type Used .....
Reservoir Pressure (psi) .
Transmissivity (md.ft/cp)
Permeability (md) .....
Skin Factor/Damage Ratio .
Storativity Ratio .....
Interporosity Flow Coeff..
Distance to Anomaly (ft).
Investigation Radius (ft).
Potentiometric Surf. (ft).

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API) ...
Basic Solids (%) .....
Gas Gravity .....
Water Cut (%) .....
Viscosity (cp) .....
Tot. Compress. (1/psi) ...
Porosity (%) ..... 5 - 10
Reservoir Temperature (F). 89
Form.Vol.Factor (bbl/STB).

PRODUCTION RATE DURING TEST: -

COMMENTS:

NO ANALYSIS HAS BEEN PERFORMED OF THIS TEST DATA, AS BOTH SHUT-IN PRESSURE BUILD-UP PERIODS WERE TOTALLY DOMINATED BY WELLBORE STORAGE EFFECTS FOR THE ENTIRE BUILD-UP PERIOD.

SEQUENCE OF EVENTS

Schlumberger

EVENT NO.	DATE	TIME (HR:MIN)	DESCRIPTION	ELAPSED TIME (MINS)	BHP (PSIA)	BLOW (IN.-H2O)
1	19-NOV	0732	SET PACKERS	-0.05	1388	
2		0737	OPENED TOOL	0.00	54	1/2" BLOW
		0742				7" BLOW
		0747				9" BLOW
3		0752	CLOSED FOR INITIAL SHUTIN	15.00	57	9" BLOW
4		0822	FINISHED SHUT-IN	45.56	516	
5		0826	RE-OPENED TOOL	49.00	65	16" BLOW
		0831				10" BLOW
		0836				8" BLOW
		0841				5" BLOW
		0846				4" BLOW
		0851				3" BLOW
		0856				2.5" BLOW
		0901				2" BLOW
		0906				2" BLOW
6		0911	CLOSED FOR FINAL SHUT-IN	92.87	82	1" BLOW
7		1110	FINISHED SHUT-IN	213.58	683	
8		1111	PULLED PACKERS LOOSE	221.04	1379	
			NOTE: NO FILL ON BOTTOM.			
			DID NOT REVERSE OUT.			

****
* WELL TEST DATA PRINTOUT *
****

FIELD REPORT # : 113883

COMPANY : CELSIUS ENERGY
WELL : CELSIUS #8-1

INSTRUMENT # : 1867
CAPACITY [PSI] : 2800.
DEPTH [FT] : 2939.0
PORT OPENING : OUTSIDE
TEMPERATURE [DEG F] : 89.0

LABEL POINT INFORMATION

#	TIME OF DAY HH:MM:SS	DATE DD-MM	EXPLANATION	ELAPSED TIME,MIN	BOT HOLE PRESSURE PSIA
1	7:36:57	19-NO	HYDROSTATIC MUD	-0.05	1388
2	7:37: 0	19-NO	START FLOW	0.00	54
3	7:52: 0	19-NO	END FLOW & START SHUT-IN	15.00	57
4	8:22:34	19-NO	END SHUT-IN	45.56	516
5	8:26: 0	19-NO	START FLOW	49.00	65
6	9: 9:52	19-NO	END FLOW & START SHUT-IN	92.87	82
7	11:10:35	19-NO	END SHUT-IN	213.58	683
8	11:18: 2	19-NO	HYDROSTATIC MUD	221.04	1379

SUMMARY OF FLOW PERIODS

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA
1	0.00	15.00	15.00	54	57
2	49.00	92.87	43.87	65	82

SUMMARY OF SHUTIN PERIODS

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	15.00	45.56	30.56	57	516	57	15.00
2	92.87	213.58	120.71	82	683	82	58.87

TEST PHASE : FLOW PERIOD # 1

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
7:37: 0	19-NO	0.00	0.00	54
7:42: 0	19-NO	5.00	5.00	48
7:47: 0	19-NO	10.00	10.00	54
7:52: 0	19-NO	15.00	15.00	57

TEST PHASE : SHUTIN PERIOD # 1
FINAL FLOW PRESSURE [PSIA] = 57
PRODUCING TIME [MIN] = 15.00

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
7:52: 0	19-NO	15.00	0.00	57	0	
7:53: 0	19-NO	16.00	1.00	83	26	1.204
7:54: 0	19-NO	17.00	2.00	105	48	0.929
7:55: 0	19-NO	18.00	3.00	124	67	0.778
7:56: 0	19-NO	19.00	4.00	142	85	0.677
7:57: 0	19-NO	20.00	5.00	158	101	0.602
7:58: 0	19-NO	21.00	6.00	174	117	0.544
7:59: 0	19-NO	22.00	7.00	189	132	0.497
8: 0: 0	19-NO	23.00	8.00	204	147	0.459
8: 1: 0	19-NO	24.00	9.00	218	161	0.426
8: 2: 0	19-NO	25.00	10.00	234	176	0.398
8: 4: 0	19-NO	27.00	12.00	265	207	0.352
8: 6: 0	19-NO	29.00	14.00	294	237	0.316
8: 8: 0	19-NO	31.00	16.00	325	267	0.287
8:10: 0	19-NO	33.00	18.00	353	296	0.263
8:12: 0	19-NO	35.00	20.00	383	326	0.243
8:14: 0	19-NO	37.00	22.00	409	352	0.226
8:16: 0	19-NO	39.00	24.00	437	379	0.211
8:18: 0	19-NO	41.00	26.00	462	405	0.198
8:20: 0	19-NO	43.00	28.00	486	428	0.186
8:22: 0	19-NO	45.00	30.00	509	452	0.176
8:22:34	19-NO	45.56	30.56	516	459	0.173

TEST PHASE : FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
8:26: 0	19-NO	49.00	0.00	65
8:31: 0	19-NO	54.00	5.00	70
8:36: 0	19-NO	59.00	10.00	73
8:41: 0	19-NO	64.00	15.00	74
8:46: 0	19-NO	69.00	20.00	76
8:51: 0	19-NO	74.00	25.00	78
8:56: 0	19-NO	79.00	30.00	79
9: 1: 0	19-NO	84.00	35.00	80
9: 6: 0	19-NO	89.00	40.00	81
9: 9:52	19-NO	92.87	43.87	82

TEST PHASE : SHUTIN PERIOD # 2
FINAL FLOW PRESSURE [PSIA] = 82
PRODUCING TIME [MIN] = 58.87

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
9: 9:52	19-NO	92.87	0.00	82	0	
9:10:52	19-NO	93.87	1.00	91	9	1.777
9:11:52	19-NO	94.87	2.00	100	18	1.483
9:12:52	19-NO	95.87	3.00	107	25	1.314
9:13:52	19-NO	96.87	4.00	115	33	1.196
9:14:52	19-NO	97.87	5.00	123	41	1.106
9:15:52	19-NO	98.87	6.00	130	48	1.034
9:16:52	19-NO	99.87	7.00	137	55	0.974
9:17:52	19-NO	100.87	8.00	144	62	0.922
9:18:52	19-NO	101.87	9.00	152	70	0.877
9:19:52	19-NO	102.87	10.00	159	77	0.838
9:21:52	19-NO	104.87	12.00	172	90	0.771
9:23:52	19-NO	106.87	14.00	185	103	0.716
9:25:52	19-NO	108.87	16.00	198	116	0.670
9:27:52	19-NO	110.87	18.00	211	129	0.630
9:29:52	19-NO	112.87	20.00	223	141	0.596
9:31:52	19-NO	114.87	22.00	235	153	0.565
9:33:52	19-NO	116.87	24.00	248	166	0.538
9:35:52	19-NO	118.87	26.00	260	178	0.514
9:37:52	19-NO	120.87	28.00	272	190	0.492
9:39:52	19-NO	122.87	30.00	284	202	0.472
9:44:52	19-NO	127.87	35.00	315	233	0.428
9:49:52	19-NO	132.87	40.00	345	263	0.393
9:54:52	19-NO	137.87	45.00	377	295	0.363
9:59:52	19-NO	142.87	50.00	407	325	0.338
10: 4:52	19-NO	147.87	55.00	438	356	0.316
10: 9:52	19-NO	152.87	60.00	466	384	0.297
10:14:52	19-NO	157.87	65.00	493	411	0.280

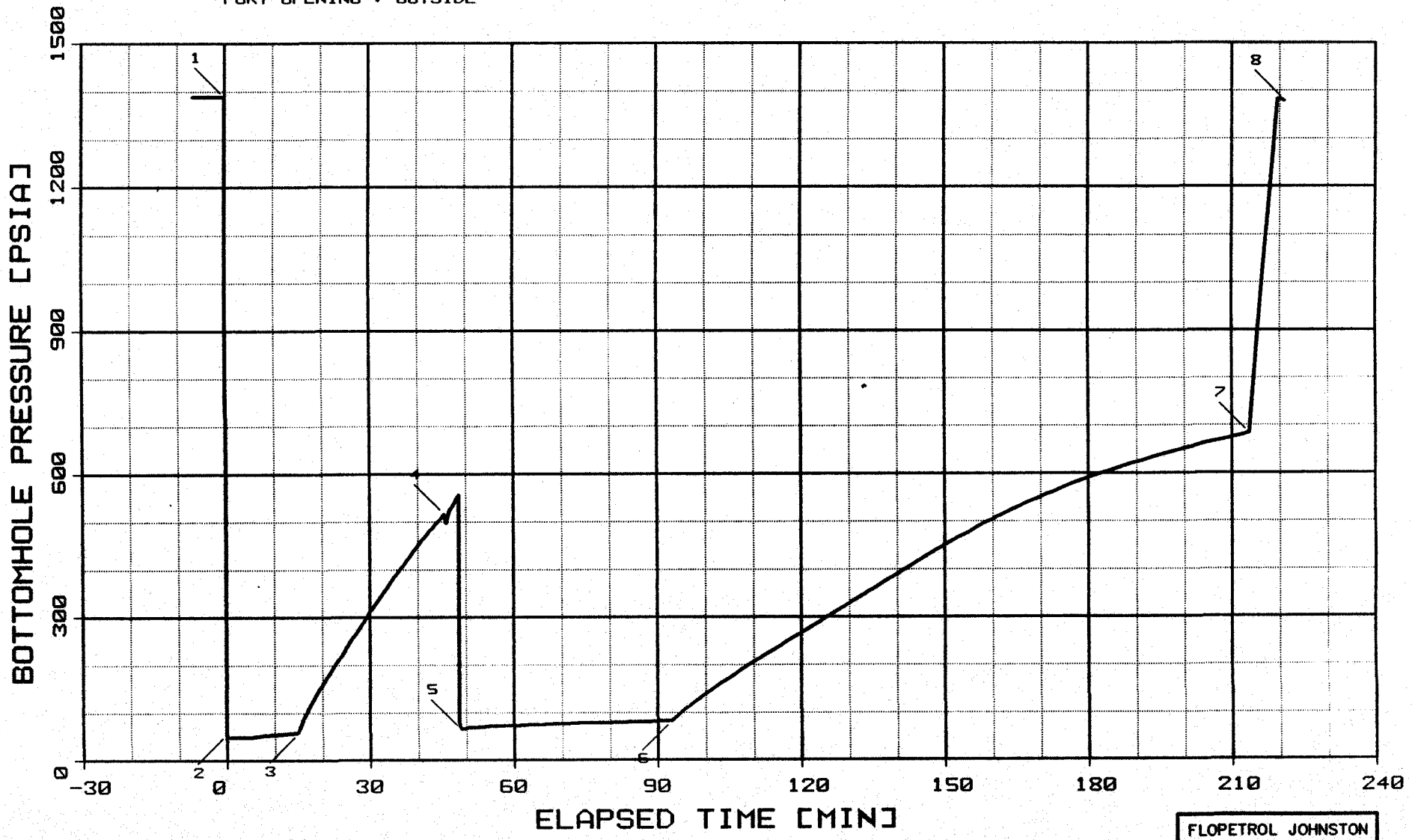
TEST PHASE : SHUTIN PERIOD # 2
FINAL FLOW PRESSURE [PSIA] = 82
PRODUCING TIME [MIN] = 58.87

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
10:19:52	19-NO	162.87	70.00	518	436	0.265
10:24:52	19-NO	167.87	75.00	541	459	0.252
10:29:52	19-NO	172.87	80.00	562	480	0.240
10:34:52	19-NO	177.87	85.00	582	500	0.229
10:39:52	19-NO	182.87	90.00	600	518	0.219
10:44:52	19-NO	187.87	95.00	616	534	0.209
10:49:52	19-NO	192.87	100.00	631	549	0.201
10:54:52	19-NO	197.87	105.00	645	563	0.193
10:59:52	19-NO	202.87	110.00	658	576	0.186
11: 4:52	19-NO	207.87	115.00	670	588	0.180
11: 9:52	19-NO	212.87	120.00	681	599	0.173
11:10:35	19-NO	213.58	120.71	683	601	0.173

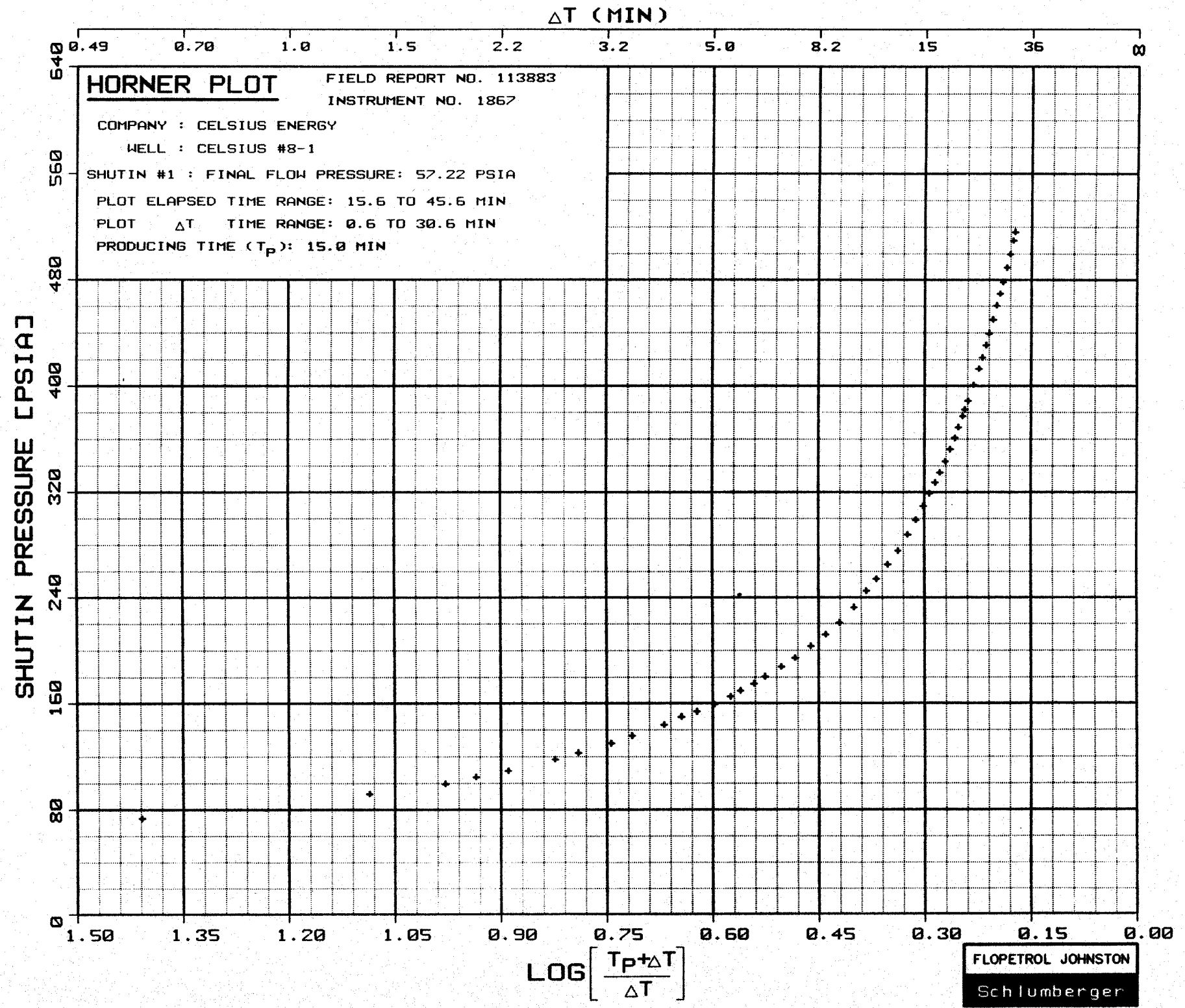
BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 113883
INSTRUMENT NO. 1867
DEPTH : 2939 FT
CAPACITY : 2800 PSI
PORT OPENING : OUTSIDE

COMPANY : CELSIUS ENERGY
WELL : CELSIUS #8-1



FLOPETROL JOHNSTON
Schlumberger


ΔT (MIN)
0.49
0.70
1.0
1.5
2.2
3.2
5.0
8.2
15
36
∞
HORNER PLOT
FIELD REPORT NO. 113883
INSTRUMENT NO. 1867
COMPANY : CELSIUS ENERGY
WELL : CELSIUS #8-1
SHUTIN #1 : FINAL FLOW PRESSURE: 57.22 PSIA
PLOT ELAPSED TIME RANGE: 15.6 TO 45.6 MIN
PLOT ΔT TIME RANGE: 0.6 TO 30.6 MIN
PRODUCING TIME (Tp): 15.0 MIN
SHUTIN PRESSURE [PSIA]
640
560
480
400
320
240
160
80
0
1.50
1.35
1.20
1.05
0.90
0.75
0.60
0.45
0.30
0.15
0.00
LOG[(Tp+ΔT)/ΔT]
FLOPETROL JOHNSTON
Schlumberger

LOG LOG PLOT

COMPANY : CELSIUS ENERGY

WELL : CELSIUS #8-1

FIELD REPORT NO. 113883

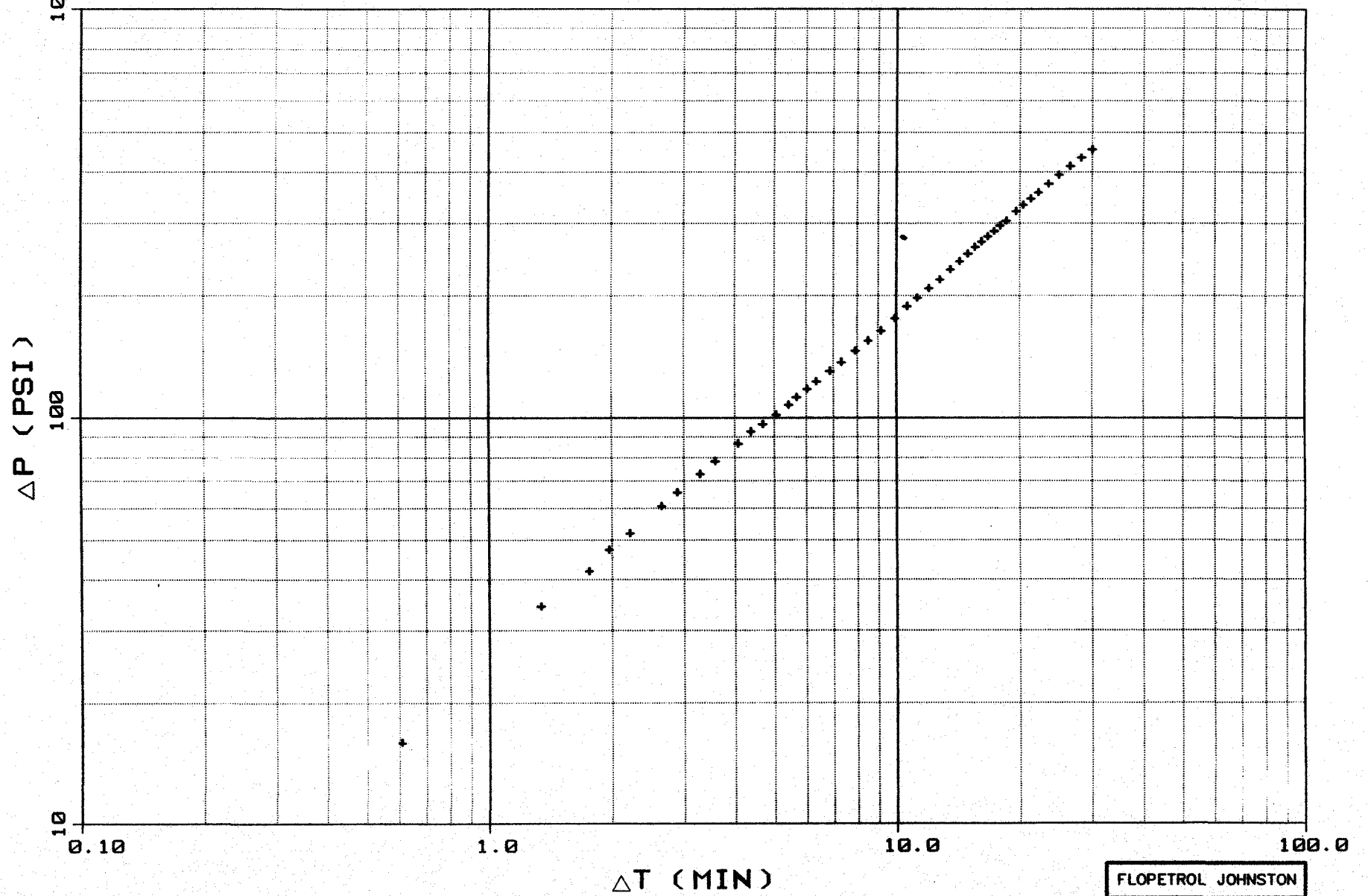
INSTRUMENT NO. 1867

SHUTIN #1 :

FINAL FLOW PRESSURE (PWF): 57.22 PSIA

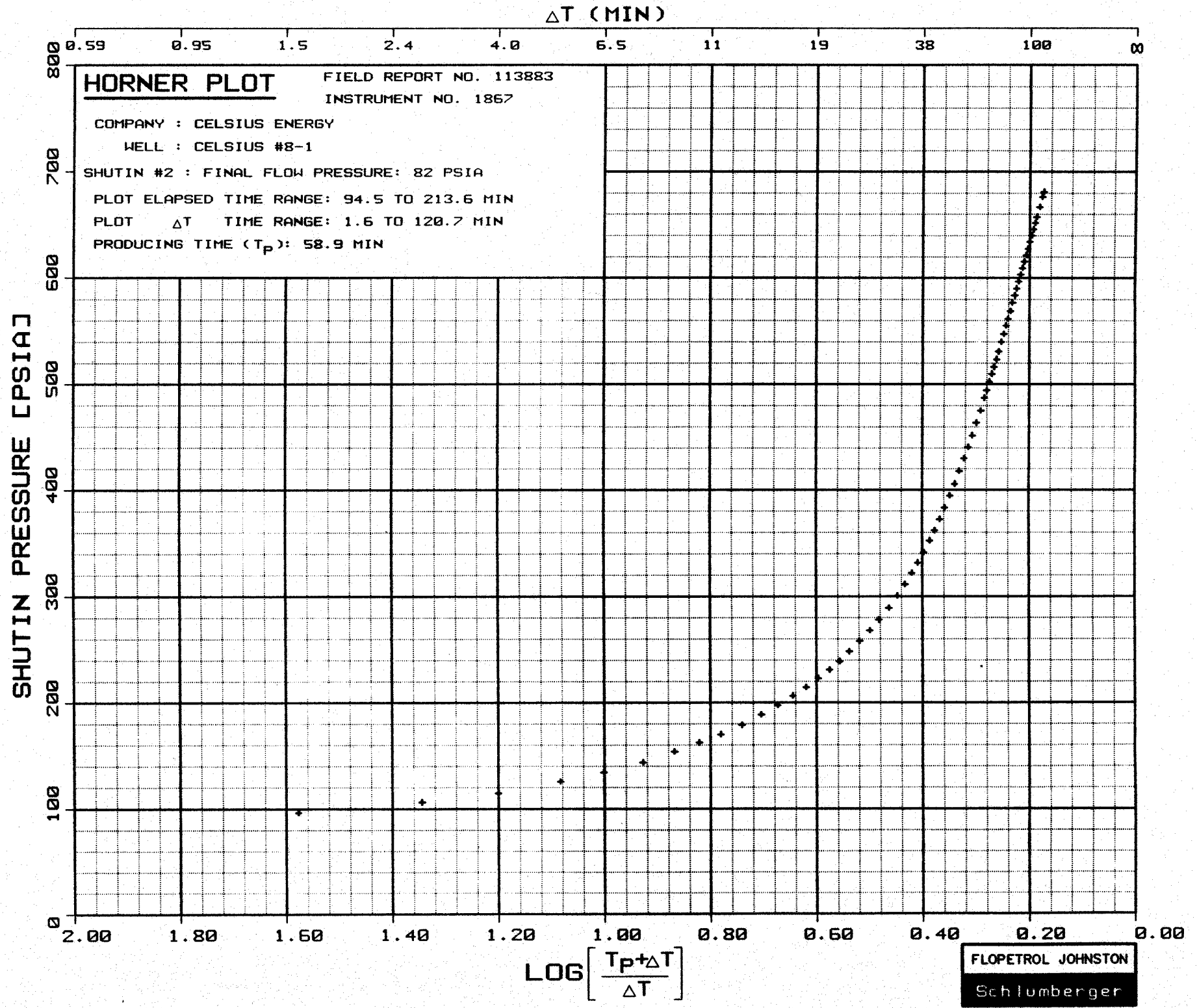
PLOT ELAPSED TIME RANGE: 15.6 TO 45.6 MIN

PLOT ΔT TIME RANGE: 0.6 TO 30.6 MIN



FLOPETROL JOHNSTON

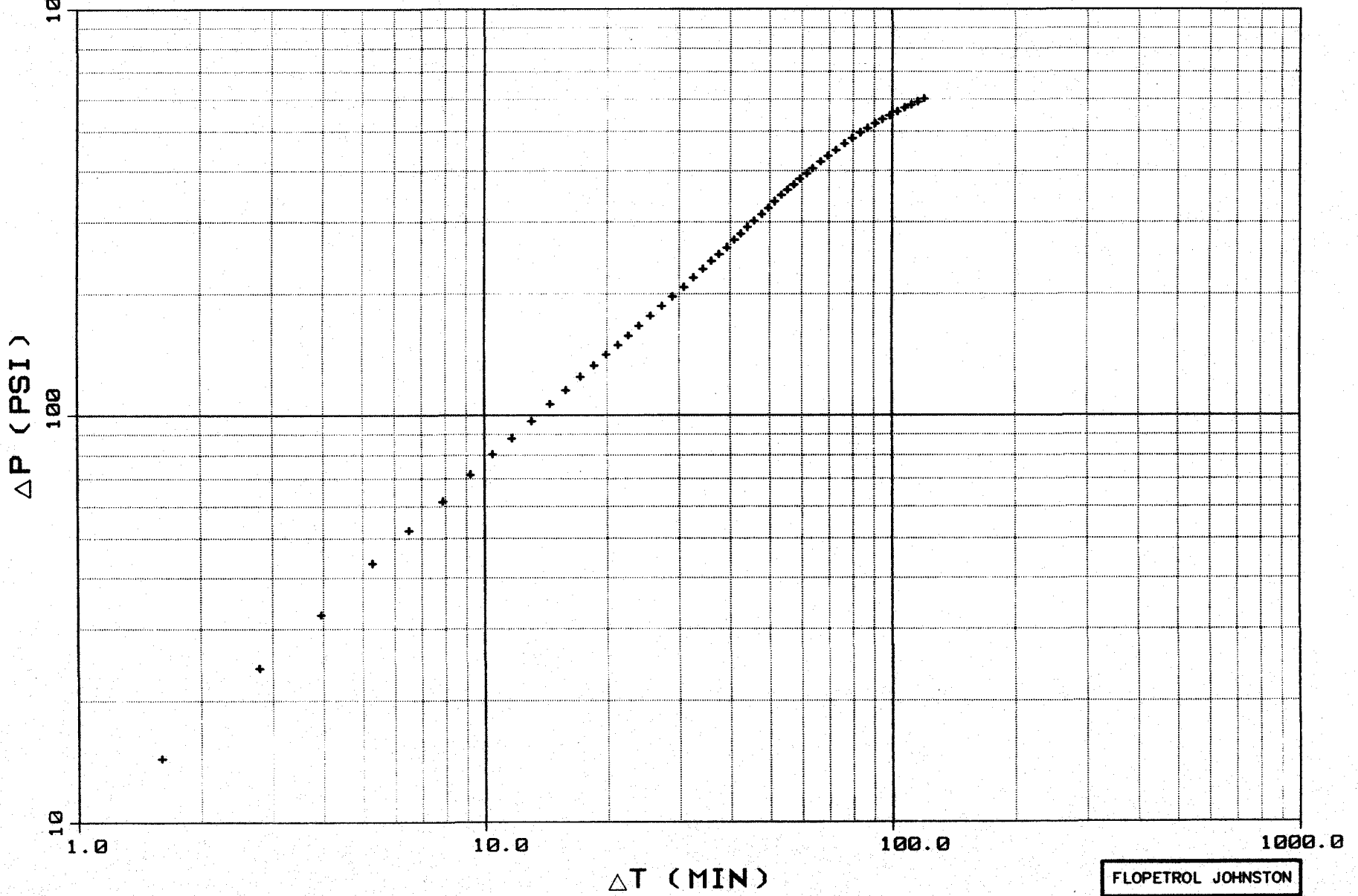
Schlumberger


ΔT (MIN)
0.59
0.95
1.5
2.4
4.0
6.5
11
19
38
100
∞
HORNER PLOT
FIELD REPORT NO. 113883
INSTRUMENT NO. 1867
COMPANY : CELSIUS ENERGY
WELL : CELSIUS #8-1
SHUTIN #2 : FINAL FLOW PRESSURE: 82 PSIA
PLOT ELAPSED TIME RANGE: 94.5 TO 213.6 MIN
PLOT ΔT TIME RANGE: 1.6 TO 120.7 MIN
PRODUCING TIME (Tp): 58.9 MIN
SHUTIN PRESSURE [PSIA]
800
700
600
500
400
300
200
100
0
2.00
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
LOG [Tp+ΔT / ΔT]
FLOPETROL JOHNSTON
Schlumberger

LOG LOG PLOT

COMPANY : CELSIUS ENERGY
WELL : CELSIUS #8-1
FIELD REPORT NO. 113883
INSTRUMENT NO. 1867

SHUTIN #2 :
FINAL FLOW PRESSURE (PWF): 82 PSIA
PLOT ELAPSED TIME RANGE: 94.5 TO 213.6 MIN
PLOT ΔT TIME RANGE: 1.6 TO 120.7 MIN



FLOPETROL JOHNSTON
Schlumberger

REPORT NO. 113883

PAGE NO. 1

TEST DATE: 19-NOV-1989

S T A R™

A Schlumberger Transient Analysis Report

Of A Schlumberger Drillstem Test

Schlumberger

Company: CELSIUS ENERGY

Well: CELSIUS FEDERAL 8-1

TEST IDENTIFICATION

Test Type ..... MFE OH DST
Test No. 2
Formation ..... KAIBAB
Test Interval (ft) ... 2934 - 2952
Reference Depth ..... KELLY BUSHING

WELL LOCATION

Field .....
County ..... EMERY
State ..... UTAH
Sec/Twn/Rng S8T21SR9E
Elevation (ft) 5752

HOLE CONDITIONS

Total Depth (MD/TVD)(ft) . 2952
Hole Size (in) 7 7/8
Casing/Liner I.D. (in) ...
Perf'd Interv./Nt Pay(ft). -- / 10
Shot Density/Diameter(in).

MUD PROPERTIES

Mud Type ..... LSND
Mud Weight (lb/gal) 8.8
Mud Resistivity (ohm.m) .. 10 @ 60 DEG. F.
Filtrate Resistiv.(ohm.m). 10 @ 60 DEG. F.
Filtrate Chlorides (ppm) . 240

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi). 1388
Gas Cushion Type ..... NONE
Surface Pressure (psi) ... --
Liquid Cushion Type ..... NONE
Cushion Length (ft) ..... --

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D.(in). 2342 / 3.8
Collar Length ft/I.D.(in). 547 / 2.25
Packer Depths (ft) 2934
Bottomhole Choke Size(in). 15/16
Gauge Depth (ft)/Type .... 2939 / MECHANICAL

NET PIPE RECOVERY

Volume	Fluid Type	Properties
3 FT.	M&GC OIL	10%OIL, 90% MUD
124 FT.	G&OC MUD	RW=10@60D/230 PPM CL
		10% OIL, 90% MUD

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
0.18 SCF	GAS	
400 CC	OIL	S.C. GRINDOUT:
600 CC	WATER	40%OIL, 30%WATER,
		30%MUD
Press. 50	GOR:	GLR:

VALIDATION RESULTS

Model of Behavior .....
Fluid Type Used .....
Reservoir Pressure (psi) .
Transmissivity (md.ft/cp)
Permeability (md) .....
Skin Factor/Damage Ratio .
Storativity Ratio .....
Interporosity Flow Coeff..
Distance to Anomaly (ft).
Investigation Radius (ft).
Potentiometric Surf. (ft).

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API) ...
Basic Solids (%) .....
Gas Gravity .....
Water Cut (%) .....
Viscosity (cp) .....
Tot. Compress. (1/psi) ...
Porosity (%) ..... 5 - 10
Reservoir Temperature (F). 89
Form.Vol.Factor (bbl/STB).

PRODUCTION RATE DURING TEST: -

COMMENTS:

NO ANALYSIS HAS BEEN PERFORMED OF THIS TEST DATA, AS BOTH SHUT-IN PRESSURE BUILD-UP PERIODS WERE TOTALLY DOMINATED BY WELLBORE STORAGE EFFECTS FOR THE ENTIRE BUILD-UP PERIOD.

REPORT NO. 113883
PAGE NO. 2

SEQUENCE OF EVENTS

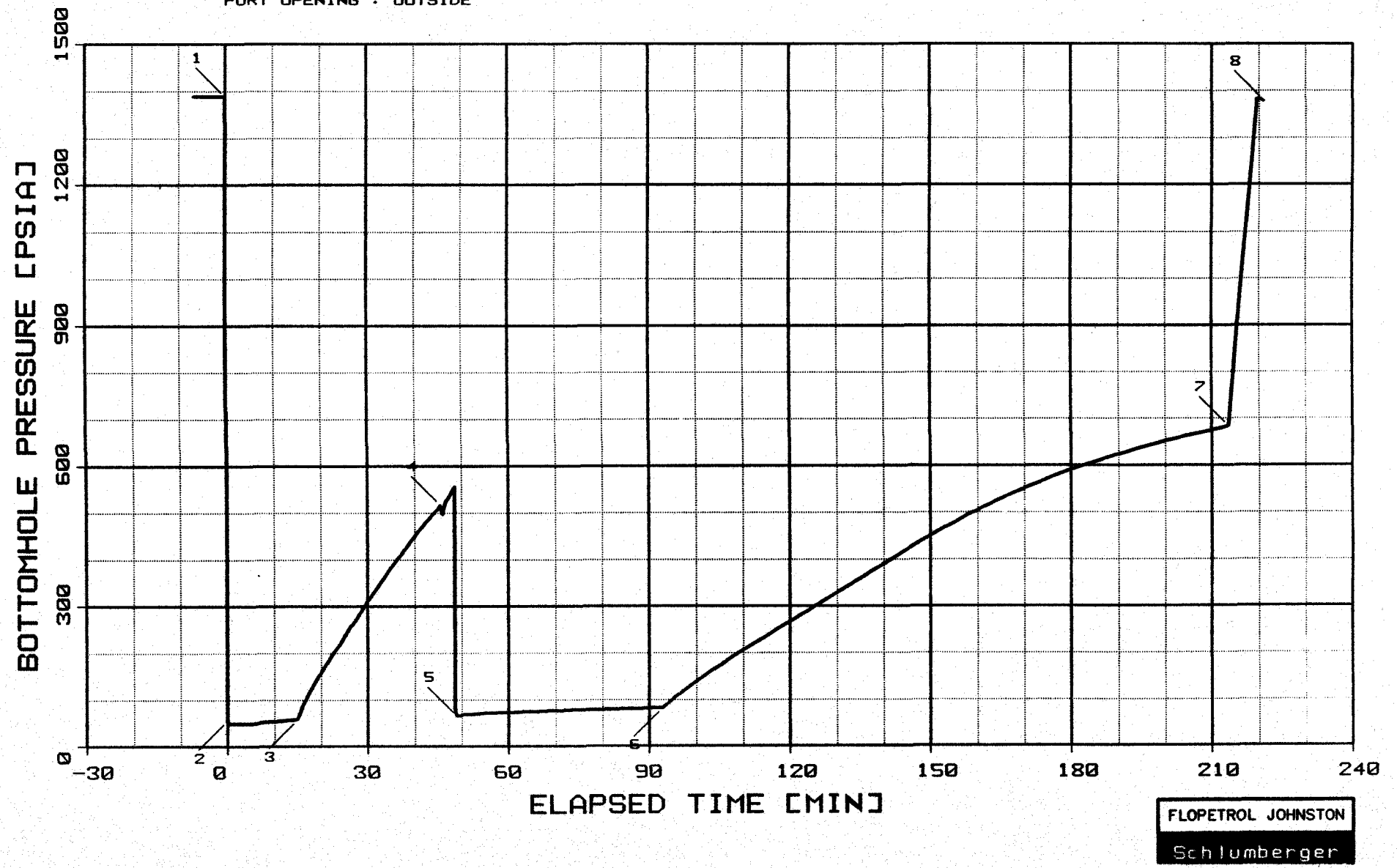
Schlumberger

EVENT NO.	DATE	TIME (HR:MIN)	DESCRIPTION	ELAPSED TIME (MINS)	BHP (PSIA)	BLOW (IN.-H2O)
1	19-NOV	0732	SET PACKERS	-0.05	1388	
2		0737	OPENED TOOL	0.00	54	1/2" BLOW
		0742				7" BLOW
		0747				9" BLOW
3		0752	CLOSED FOR INITIAL SHUTIN	15.00	57	9" BLOW
4		0822	FINISHED SHUT-IN	45.56	516	
5		0826	RE-OPENED TOOL	49.00	65	16" BLOW
		0831				10" BLOW
		0836				8" BLOW
		0841				5" BLOW
		0846				4" BLOW
		0851				3" BLOW
		0856				2.5" BLOW
		0901				2" BLOW
		0906				2" BLOW
6		0911	CLOSED FOR FINAL SHUT-IN	92.87	82	1" BLOW
7		1110	FINISHED SHUT-IN	213.58	683	
8		1111	PULLED PACKERS LOOSE	221.04	1379	
			NOTE: NO FILL ON BOTTOM.			
			DID NOT REVERSE OUT.			

BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 113883
INSTRUMENT NO. 1867
DEPTH : 2939 FT
CAPACITY : 2800 PSI
PORT OPENING : OUTSIDE

COMPANY : CELSIUS ENERGY
WELL : CELSIUS #8-1



FLOPETROL JOHNSTON
Schlumberger

****
* WELL TEST DATA PRINTOUT *
****

FIELD REPORT # : 113883

COMPANY : CELSIUS ENERGY
WELL : CELSIUS #8-1

INSTRUMENT # : 1867
CAPACITY [PSI] : 2800.
DEPTH [FT] : 2939.0
PORT OPENING : OUTSIDE
TEMPERATURE [DEG F] : 89.0

LABEL POINT INFORMATION

#	TIME OF DAY HH:MM:SS	DATE DD-MM	EXPLANATION	ELAPSED TIME,MIN	BOT HOLE PRESSURE PSIA
1	7:36:57	19-NO	HYDROSTATIC MUD	-0.05	1388
2	7:37: 0	19-NO	START FLOW	0.00	54
3	7:52: 0	19-NO	END FLOW & START SHUT-IN	15.00	57
4	8:22:34	19-NO	END SHUT-IN	45.56	516
5	8:26: 0	19-NO	START FLOW	49.00	65
6	9: 9:52	19-NO	END FLOW & START SHUT-IN	92.87	82
7	11:10:35	19-NO	END SHUT-IN	213.58	683
8	11:18: 2	19-NO	HYDROSTATIC MUD	221.04	1379

SUMMARY OF FLOW PERIODS

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA
1	0.00	15.00	15.00	54	57
2	49.00	92.87	43.87	65	82

SUMMARY OF SHUTIN PERIODS

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	15.00	45.56	30.56	57	516	57	15.00
2	92.87	213.58	120.71	82	683	82	58.87

TEST PHASE : FLOW PERIOD # 1

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
7:37: 0	19-NO	0.00	0.00	54
7:42: 0	19-NO	5.00	5.00	48
7:47: 0	19-NO	10.00	10.00	54
7:52: 0	19-NO	15.00	15.00	57

TEST PHASE : SHUTIN PERIOD # 1
FINAL FLOW PRESSURE [PSIA] = 57
PRODUCING TIME [MIN] = 15.00

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
7:52: 0	19-NO	15.00	0.00	57	0	
7:53: 0	19-NO	16.00	1.00	83	26	1.204
7:54: 0	19-NO	17.00	2.00	105	48	0.929
7:55: 0	19-NO	18.00	3.00	124	67	0.778
7:56: 0	19-NO	19.00	4.00	142	85	0.677
7:57: 0	19-NO	20.00	5.00	158	101	0.602
7:58: 0	19-NO	21.00	6.00	174	117	0.544
7:59: 0	19-NO	22.00	7.00	189	132	0.497
8: 0: 0	19-NO	23.00	8.00	204	147	0.459
8: 1: 0	19-NO	24.00	9.00	218	161	0.426
8: 2: 0	19-NO	25.00	10.00	234	176	0.398
8: 4: 0	19-NO	27.00	12.00	265	207	0.352
8: 6: 0	19-NO	29.00	14.00	294	237	0.316
8: 8: 0	19-NO	31.00	16.00	325	267	0.287
8:10: 0	19-NO	33.00	18.00	353	296	0.263
8:12: 0	19-NO	35.00	20.00	383	326	0.243
8:14: 0	19-NO	37.00	22.00	409	352	0.226
8:16: 0	19-NO	39.00	24.00	437	379	0.211
8:18: 0	19-NO	41.00	26.00	462	405	0.198
8:20: 0	19-NO	43.00	28.00	486	428	0.186
8:22: 0	19-NO	45.00	30.00	509	452	0.176
8:22:34	19-NO	45.56	30.56	516	459	0.173

TEST PHASE : FLOW PERIOD # 2

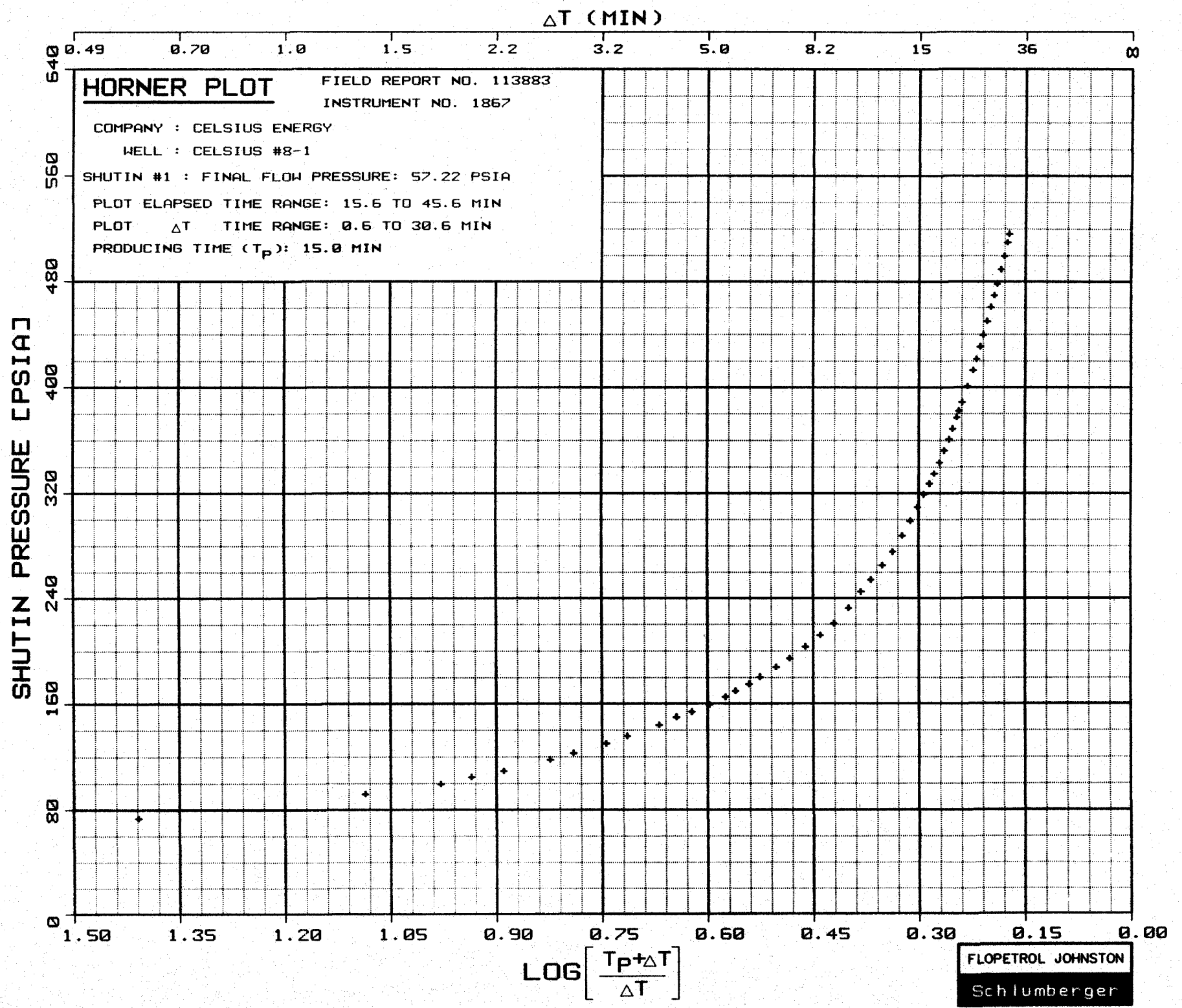
TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
8:26: 0	19-NO	49.00	0.00	65
8:31: 0	19-NO	54.00	5.00	70
8:36: 0	19-NO	59.00	10.00	73
8:41: 0	19-NO	64.00	15.00	74
8:46: 0	19-NO	69.00	20.00	76
8:51: 0	19-NO	74.00	25.00	78
8:56: 0	19-NO	79.00	30.00	79
9: 1: 0	19-NO	84.00	35.00	80
9: 6: 0	19-NO	89.00	40.00	81
9: 9:52	19-NO	92.87	43.87	82

TEST PHASE : SHUTIN PERIOD # 2
FINAL FLOW PRESSURE [PSIA] = 82
PRODUCING TIME [MIN] = 58.87

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
9: 9:52	19-NO	92.87	0.00	82	0	
9:10:52	19-NO	93.87	1.00	91	9	1.777
9:11:52	19-NO	94.87	2.00	100	18	1.483
9:12:52	19-NO	95.87	3.00	107	25	1.314
9:13:52	19-NO	96.87	4.00	115	33	1.196
9:14:52	19-NO	97.87	5.00	123	41	1.106
9:15:52	19-NO	98.87	6.00	130	48	1.034
9:16:52	19-NO	99.87	7.00	137	55	0.974
9:17:52	19-NO	100.87	8.00	144	62	0.922
9:18:52	19-NO	101.87	9.00	152	70	0.877
9:19:52	19-NO	102.87	10.00	159	77	0.838
9:21:52	19-NO	104.87	12.00	172	90	0.771
9:23:52	19-NO	106.87	14.00	185	103	0.716
9:25:52	19-NO	108.87	16.00	198	116	0.670
9:27:52	19-NO	110.87	18.00	211	129	0.630
9:29:52	19-NO	112.87	20.00	223	141	0.596
9:31:52	19-NO	114.87	22.00	235	153	0.565
9:33:52	19-NO	116.87	24.00	248	166	0.538
9:35:52	19-NO	118.87	26.00	260	178	0.514
9:37:52	19-NO	120.87	28.00	272	190	0.492
9:39:52	19-NO	122.87	30.00	284	202	0.472
9:44:52	19-NO	127.87	35.00	315	233	0.428
9:49:52	19-NO	132.87	40.00	345	263	0.393
9:54:52	19-NO	137.87	45.00	377	295	0.363
9:59:52	19-NO	142.87	50.00	407	325	0.338
10: 4:52	19-NO	147.87	55.00	438	356	0.316
10: 9:52	19-NO	152.87	60.00	466	384	0.297
10:14:52	19-NO	157.87	65.00	493	411	0.280

TEST PHASE : SHUTIN PERIOD # 2
FINAL FLOW PRESSURE [PSIA] = 82
PRODUCING TIME [MIN] = 58.87

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
10:19:52	19-NO	162.87	70.00	518	436	0.265
10:24:52	19-NO	167.87	75.00	541	459	0.252
10:29:52	19-NO	172.87	80.00	562	480	0.240
10:34:52	19-NO	177.87	85.00	582	500	0.229
10:39:52	19-NO	182.87	90.00	600	518	0.219
10:44:52	19-NO	187.87	95.00	616	534	0.209
10:49:52	19-NO	192.87	100.00	631	549	0.201
10:54:52	19-NO	197.87	105.00	645	563	0.193
10:59:52	19-NO	202.87	110.00	658	576	0.186
11: 4:52	19-NO	207.87	115.00	670	588	0.180
11: 9:52	19-NO	212.87	120.00	681	599	0.173
11:10:35	19-NO	213.58	120.71	683	601	0.173


ΔT (MIN)
0.49
0.70
1.0
1.5
2.2
3.2
5.0
8.2
15
36
∞
HORNER PLOT
FIELD REPORT NO. 113883
INSTRUMENT NO. 1867
COMPANY : CELSIUS ENERGY
WELL : CELSIUS #8-1
SHUTIN #1 : FINAL FLOW PRESSURE: 57.22 PSIA
PLOT ELAPSED TIME RANGE: 15.6 TO 45.6 MIN
PLOT ΔT TIME RANGE: 0.6 TO 30.6 MIN
PRODUCING TIME (T_P): 15.0 MIN
SHUTIN PRESSURE [PSIA]
640
560
480
400
320
240
160
80
0
1.50
1.35
1.20
1.05
0.90
0.75
0.60
0.45
0.30
0.15
0.00
LOG $\left[\frac{T_P+\Delta T}{\Delta T}\right]$
FLOPETROL JOHNSTON
Schlumberger

LOG LOG PLOT

COMPANY : CELSIUS ENERGY

WELL : CELSIUS #8-1

FIELD REPORT NO. 113883

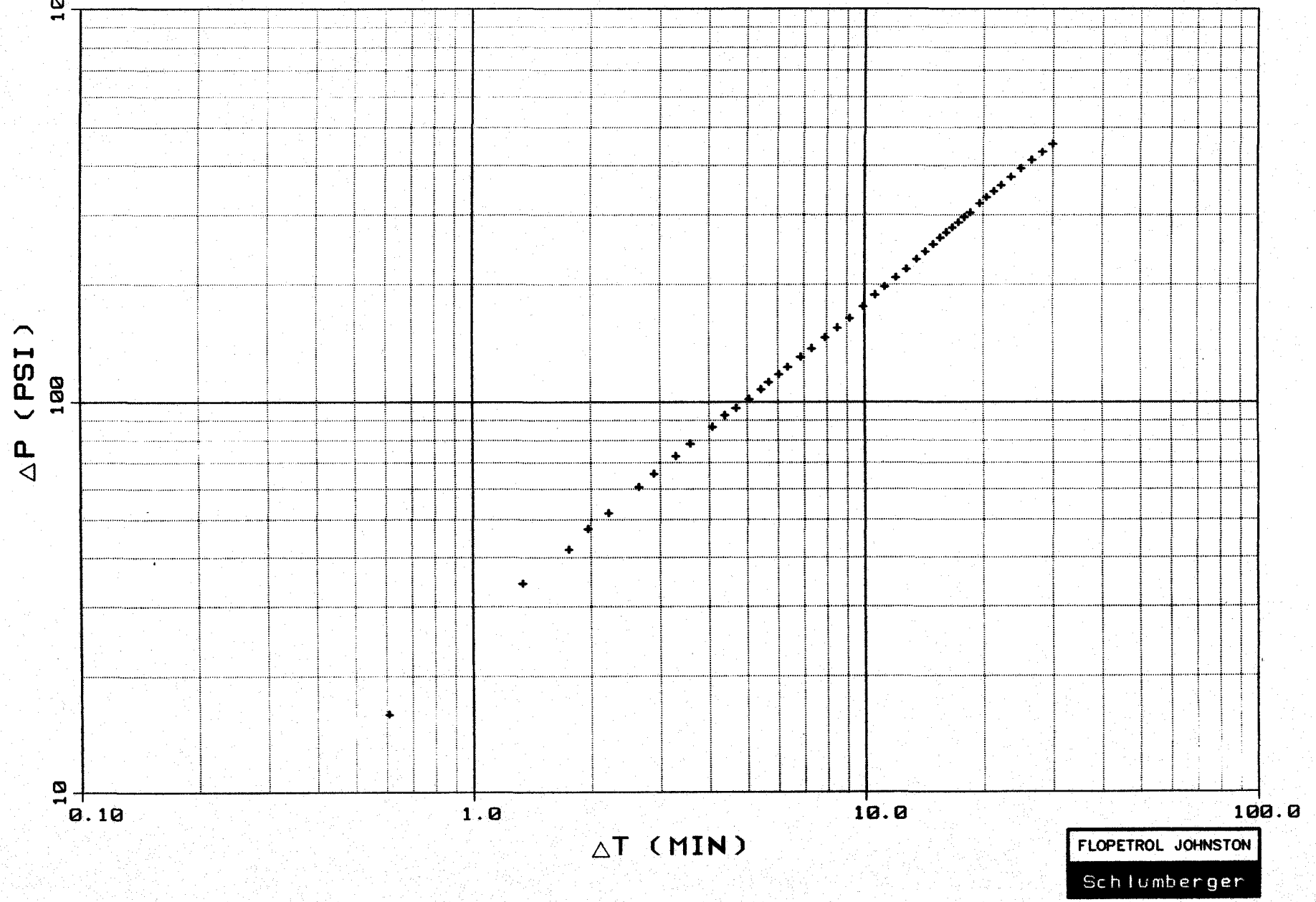
INSTRUMENT NO. 1867

SHUTIN #1 :

FINAL FLOW PRESSURE (PWF): 57.22 PSIA

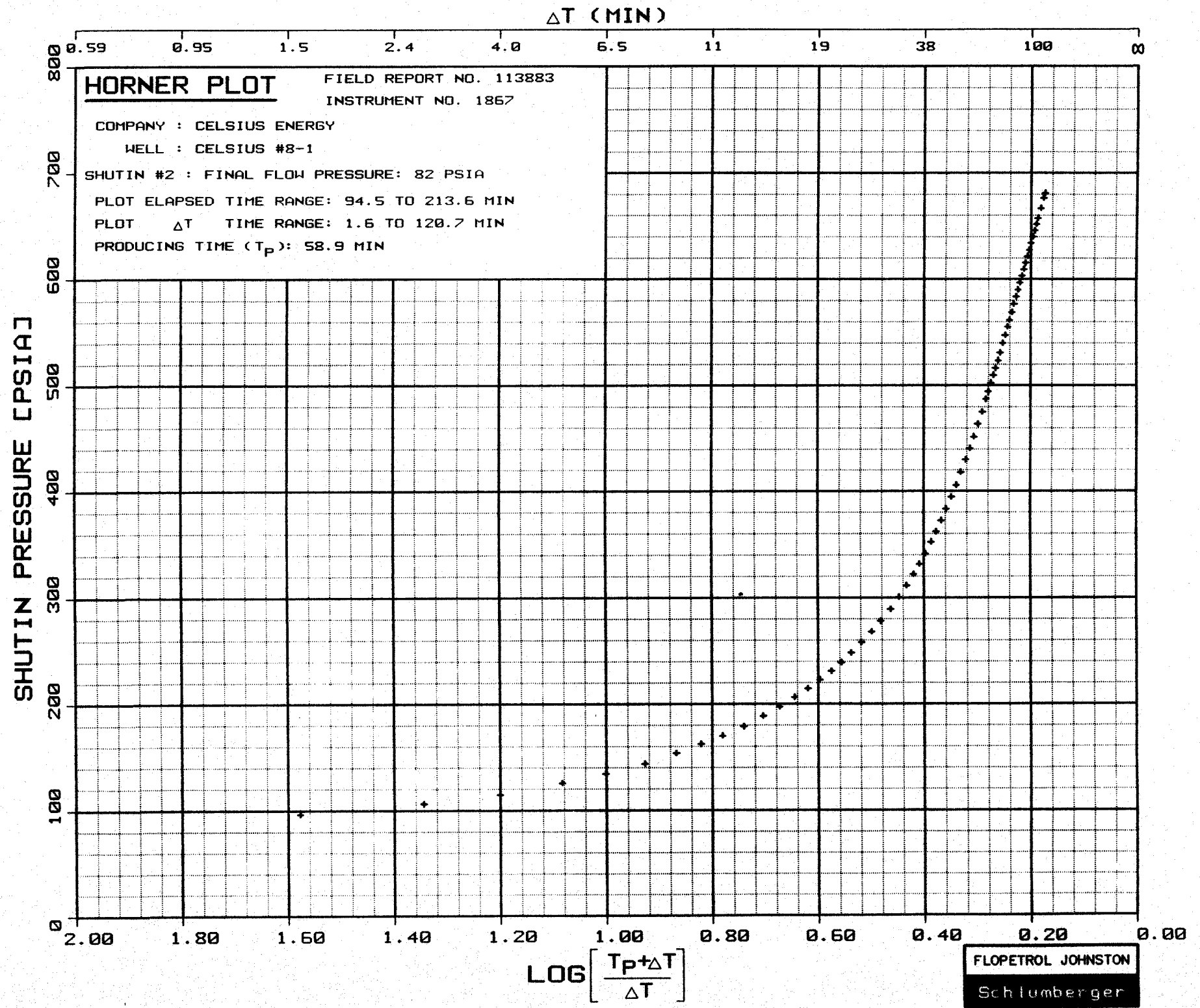
PLOT ELAPSED TIME RANGE: 15.6 TO 45.6 MIN

PLOT ΔT TIME RANGE: 0.6 TO 30.6 MIN



FLOPETROL JOHNSTON

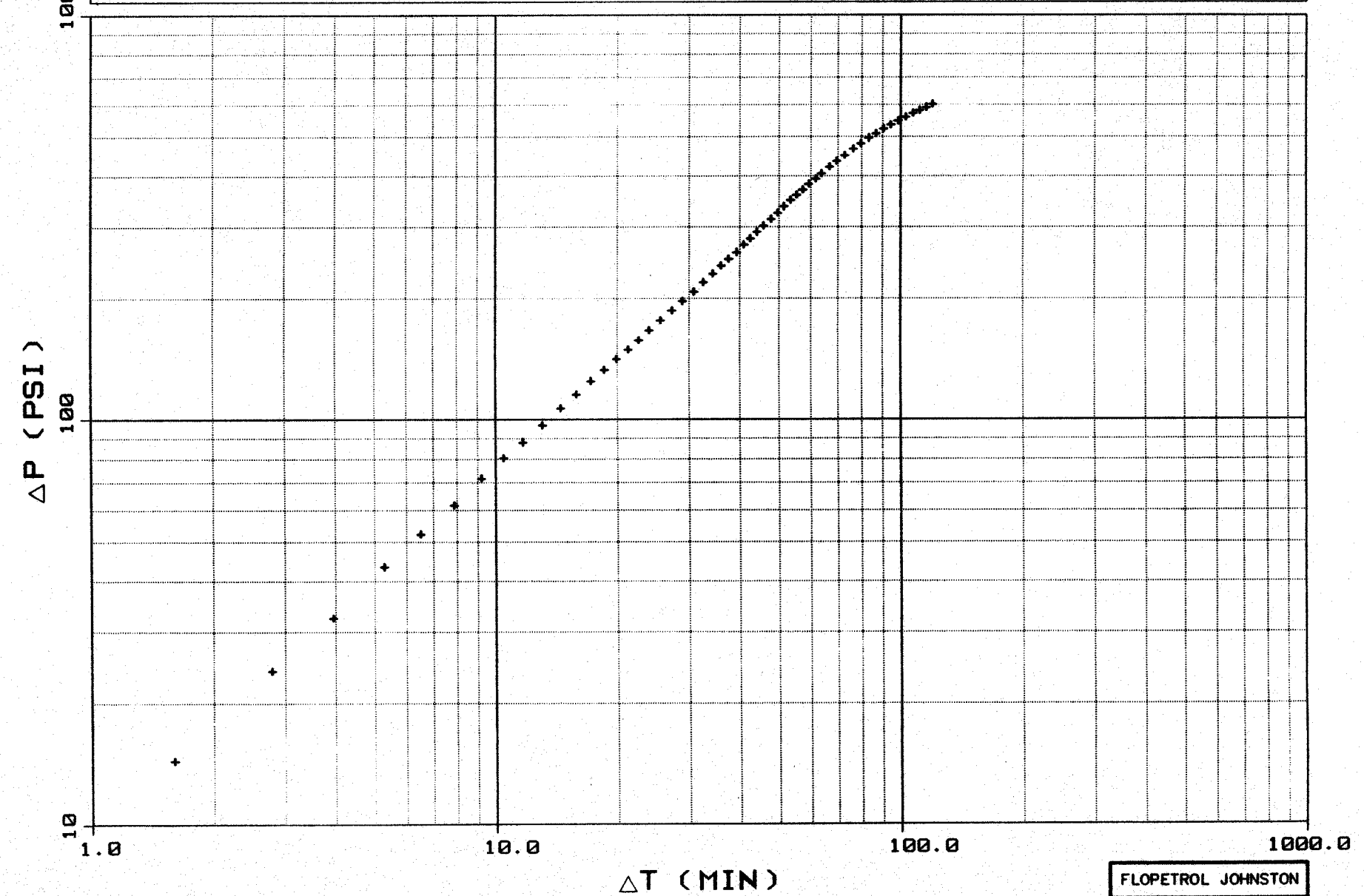
Schlumberger


ΔT (MIN)
0.59
0.95
1.5
2.4
4.0
6.5
11
19
38
100
∞
HORNER PLOT
FIELD REPORT NO. 113883
INSTRUMENT NO. 1867
COMPANY : CELSIUS ENERGY
WELL : CELSIUS #8-1
SHUTIN #2 : FINAL FLOW PRESSURE: 82 PSIA
PLOT ELAPSED TIME RANGE: 94.5 TO 213.6 MIN
PLOT ΔT TIME RANGE: 1.6 TO 120.7 MIN
PRODUCING TIME (Tp): 58.9 MIN
SHUTIN PRESSURE [PSIA]
800
700
600
500
400
300
200
100
0
2.00
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
LOG [(Tp+ΔT)/ΔT]
FLOPETROL JOHNSTON
Schlumberger

LOG LOG PLOT

COMPANY : CELSIUS ENERGY
WELL : CELSIUS #8-1
FIELD REPORT NO. 113883
INSTRUMENT NO. 1867

SHUTIN #2 :
FINAL FLOW PRESSURE (PWF): 82 PSIA
PLOT ELAPSED TIME RANGE: 94.5 TO 213.6 MIN
PLOT ΔT TIME RANGE: 1.6 TO 120.7 MIN



FLOPETROL JOHNSTON
Schlumberger

Form 3160-4
(November 1983)
(formerly 9-330)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.: U - 64425

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: -

7. UNIT AGREEMENT NAME: -

8. FARM OR LEASE NAME: Celsius Federal

9. WELL NO.: 8-1

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: 8 - T 21 S, R 9 E SLM

RECEIVED
DEC 06 1989
DIVISION OF OIL, GAS & MINING

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☒ Other

b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☒ DIFF. RESVR. ☐ Other P & A

2. NAME OF OPERATOR: Celsius Energy Company

3. ADDRESS OF OPERATOR: 1125 17th Street, #2240, Denver, CO 80202

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: 2221' FEL, 944' FNL, NW NE
At top prod. interval reported below
At total depth

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
43-015-30232	9-18-89	Emery	UT

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
11-6-89	11-22-89	N A	5740' Ungraded	N A

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
3226'	Surface		→	Yes	No

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: None - The well was Plugged and Abandoned

25. WAS DIRECTIONAL SURVEY MADE: Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN: DIL/BHC Sonic-GR/FDC-CNL Fracture/Dipmeter

27. WAS WELL CORED: No

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8-5/8"	24	217'	12-1/4"	145 Sacks	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
NA				

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
N A		

31. PERFORATION RECORD (*Interval, size and number*): -

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
NA	

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
N A		

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED A. R. Logan TITLE Manager - Operations DATE 12-4-89

*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
Carmel	Surface	
Navajo	696'	
Kayenta	1272'	
Wingate	1470'	
Chinle	1800'	
Moenkopi	2096'	
Kaibab	2932'	
White Rim	3060'	
Elephant Canyon	3220'	
T.D. Loggers	3226'	

Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Budget Bureau No. 1004-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.
U - 64425

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
-

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT--" for such proposals.)

1. OIL WELL ☐ GAS WELL ☒ OTHER Dry - Plug and Abandoned

RECEIVED
DEC 06 1989
DIVISION OF OIL, GAS & MINING

7. UNIT AGREEMENT NAME
-

2. NAME OF OPERATOR
Celsius Energy Company

8. FARM OR LEASE NAME
Celsius Federal

3. ADDRESS OF OPERATOR
1125 17th Street, #2240, Denver, CO 80202

9. WELL NO.
8 - 1

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface
2221' FEL, 944' FNL NW NE

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
8 - T21S - R9E SLM

14. PERMIT NO.
43-015-30232

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
5740' Ungraded

12. COUNTY OR PARISH
Emery

13. STATE
UT

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	X	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	X
REPAIR WELL	☐	CHANGE PLANS	☐	(Other)			
(Other) Verbal from Eric Jones				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

The above well was plugged and abandoned on 11-22-89 as follows:

Plug #1 Plug Depth - 1875' - 1725' KBM - 100 Sacks Cement
Tagged Plug, 4 hrs WOC

Plug #2 Plug Depth - 746' - 646' KBM - 65 Sacks Cement
Tagged Plug

Plug #3 Plug Depth - 267' - 167' KBM - 83 Sacks

Plug #4 Plug Depth - 50' - Surface - 16 Sacks

The casing flange was cut off and a regulation Dry Hole Marker was installed.

This procedure was approved by Eric Jones of the BLM, Moab, Utah.

OIL AND GAS	
DRN	RJF
JRB	GLH
DTS	SLS
1-TAS	
2- MICROFILM	
3- FILE	

18. I hereby certify that the foregoing is true and correct

SIGNED A. R. Logan TITLE Manager-Operations DATE 12-4-89

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

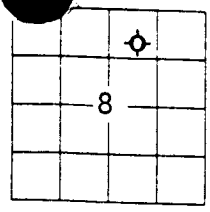
Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Form 3160-14
(October 1986)
(Formerly 9-593)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INDIVIDUAL WELL RECORD

Sec. 8
T. 21 S.
R. 9 E.
SLB& Mer.
Ref. No.



FEDERAL

Date December 18, 1989

Lease No. 64425
Lessee Celsius Energy Company 100%
Operator Celsius Energy Company
Well Name & No. Celsius Federal 8-1
A.P.I. Well No. 43-015-30232
Location 2221' FEL & 944' FNL
Date Drilling Approved September 22, 1989
Date Drilling Commenced November 6, 1989
Date Drilling Ceased November 22, 1989
Plug & Abandon Date Completed For Production November 22, 1989
Date Abandonment Approved (Final) June 17, 1991

State Utah
County Emery
Field Salt Wash
Unit/CA
District Moab
Subdivision NWNE
Well Elevation 5740 Feet
Total Depth 3226 Feet
Initial Production
Gravity A.P.I.
Initial Reservoir Pressure

GEOLOGIC FORMATIONS

SURFACE	LOWEST TESTED
Carmel	

PRODUCTIVE HORIZONS

NAME	DEPTHS	CONTENTS

SURFACE MANAGEMENT AGENCY BLM
MINERAL OWNERSHIP BLM
LEASE EXPIRATION 9/30/93

WELL STATUS

YEAR	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
1989									SPUD		P+A	
1991						FAN approved						

First Production Memorandum _____ Lease Extension Memorandum _____ Confirmation _____

Remarks _____

IWK